

AMERICAN BUILDER

BIG-VALUE HOMES



POPULAR SIZES THAT OFFER

"MORE HOUSE FOR THE MONEY"



FOR PLANS OF THIS HOME SEE PAGE 29

"LOOKING OUT on American life today, what do we see that is meaningful to the business of planning, building and selling new homes? Have the fundamentals changed? They say we are living in a 'machine age' but are the motives to home ownership altered thereby? I do not think so. I think security and privacy and independence are still the great goals to be achieved—not through renting nor mass housing, but through ownership of a little piece of mother earth with a snug little house and a fence around it!"

—Bernard L. Johnson, Editor American Builder, addressing the National Association of Real Estate Boards, Minneapolis, June, 1934.

3-1591 HOM c.1934
\$22⁵⁰

AMERICAN BUILDER

Big-Value Homes

of Popular Sizes that Offer
"More House for the Money"

Published by
Simmons-Boardman Publishing Corp.
American Builder & Building Age Unit

105 W. Adams St.
CHICAGO

30 Church St.
NEW YORK



OUTSIDE FIREPLACE, HOME PICTURED ON PAGE 109

THE BUILDING industry is delivering bigger values in today's homes than ever before in America's history. They are better planned, better built and more economically financed in 1938 than even at the bottom of the great depression.

FOREWORD—

Good News for Today's Home Builders

FACTS of unusual interest to those planning to build are now coming to the front and gaining wide recognition. These facts are, in a word:

*It is wise and prudent to build now, and
A better house can now be built for less.*

Universally it has been agreed that the time to build is on a rising market, when rents are advancing, employment is increasing and real estate activity is on the upturn—all of which conditions are now present and showing definite indications of actual "boom" times ahead for building—to confront later on those home-hungry individuals who delay now.

So, with this urge to build a new home or to buy a new home in this present cycle, the 1938 home seeker can be assured of getting good value for his money. This is "good news" which well informed building industry men are able to give to their clients and customers this year; they are promising and delivering a *better house for less*.

The reality of this fact rests on a number of factors, each an inseparable part of the home building or buying process. One should consider *all* the costs involved in acquiring and improving a piece of property before arriving at a fixed opinion as to whether costs are up or down—or "too high." As a matter of fact some of the important items of home founding expense *prior* to the purchase of structural materials are now so greatly reduced as to offset completely the recent strengthening of certain material and labor costs.

Very often the new home prospect looks into only the construction part of the proposed project; and even that he does not do thoroughly or with competent professional guidance. He makes some layman's inquiries as to lumber prices and local wage rates; and, if these strike him as "too high," he gives up the idea of building.

Now as a matter of fact the cost of materials installed on the job by skilled workmen under experienced management has very little relation to the price quoted the general public on some of the raw materials of construction. Furthermore, when all the costs are considered, it is found that some items that loom large in the public eye are really of minor importance in the total.

10 Helps to Lower Costs

There are numerous trends and factors present today to help the home builder hold down costs, and these are all affirmative answers to the question, Why build now? Ten of these favorable facts, briefly summarized, are:

1. Lower financing costs are now available under a single long-term mortgage in place of the old short-term first, second and land contract system.

2. Sites are now priced for use, not for speculation.

3. Construction costs are cut through increased use of factory-produced units of materials and equipment.

4. Labor costs are cut through increased operating efficiency due to modern tools and power equipment.

5. Lower costs result from use of simplified house designs, planned for stock sizes of materials and parts, and elimination of useless ornament.

6. Economies are enjoyed arising from present vogue for smaller, more compact houses with multiple use of space for sleeping, dining and "living."

7. Savings in fuel costs are experienced from the use of insulation and the employment of other present high standards of construction.

8. Savings in upkeep and maintenance costs result today from better design and use of proper long life materials.

9. Lower sales costs are figured on houses built for sale by operative builders, and a smaller profit margin is being asked by contractors.

10. A way to lower tax costs has been discovered through the "out to the suburbs" and "into the country" movement.

FHA Amended Rules Help Toward Low Cost Homes

Reductions in the cost of home financing under the Federal Housing Administration plan in accordance with the National Housing Act amendments approved by Congress and signed by the President on Thursday, Feb. 3, are outlined thus by Administrator Stewart McDonald: "The total maximum annual carrying charge for an FHA insured mortgage on which a commitment is hereafter issued will be $5\frac{1}{2}$ per cent.

"This will include 5 per cent interest and one-half of one per cent mortgage insurance premium. In the case of newly constructed homes securing mortgages not exceeding \$5400 and meeting certain other conditions the premium rate will be one-fourth of one per cent, making the total annual carrying charge to the borrower $5\frac{3}{4}$ per cent.

"The annual service charge of one-half of one per cent which the lending institutions have been permitted to charge under FHA regulations will be discontinued on all mortgages for which a commitment to insure is issued hereafter.

"The insurance premium in the future will be based upon the outstanding balance instead of the original face value of the mortgage as provided in the old law.

"Elimination of the annual service charge and the reduced cost of the mortgage insurance will represent a maximum saving of approximately one per cent per annum to home builders and buyers on newly constructed houses carrying mortgages of \$5400 or less. On all other insurable mortgages the saving will be approximately three-fourths of one per cent per annum.

"On newly constructed houses appraised at \$6,000 or less, the minimum permissible down payment or equity requirement will be reduced from 20 per cent to 10 per cent. Thus, on a \$6,000 newly constructed house, the minimum down payment would be \$600 and the maximum insurable mortgage would be \$5400, representing 90 per cent of the appraised value.

"On newly constructed houses appraised at \$10,000 or less, the insurable limit will be 90 per cent of the appraised value up to \$6,000 plus 80 per cent of the appraised value above \$6,000. For example, on a newly constructed \$10,000 house the minimum down payment would be \$1400 and the insurable mortgage limit would be \$8600. On all other homes housing from one to four families, the insurable mortgage limit will remain at 80 per cent of the appraised value, but not in excess of \$16,000 under any circumstances.

"This program," said Administrator McDonald, "is designed to assist families of moderate means to obtain decent and adequate housing on the most favorable terms in the history of the country. I am confident that it will safeguard the interest of both the borrower and the lender and should prove a stimulus to construction."

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Richard F. King, architect, and
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of Los Angeles.

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WORKING PLANS

THE study of a book of home designs is sure to lead a good many home seekers, as well as building industry men, to inquire for working plans and specifications of houses illustrated. The *American Builder* is NOT in the stock plan business and does not have working plans to supplement the design suggestions presented in this book. This supplementary service should be secured, if needed, directly from the architect or building designer who originated the design and whose name and address in each instance are given.

These designs are offered with the primary purpose of guiding builders and designers—suggestions to them for their own planning and building activities. The best and most satisfactory planning service is that which is furnished by local men of competence and experience in this field. The best advice to any home seeker desiring to build is to search out the local man who has a reputation for building good houses. Intelligence and sympathetic interest applied at home and with full knowledge of local conditions, tastes and standards produce, on the average, much more satisfactory results than out-of-town, long distance advice, even from the most expert.

In offering this book compiled from the best of *American Builder* designs, the Editors reiterate that in residential construction no problem is of greater importance today than that of good design. The *American Builder*, published monthly, has for years been foremost in advocating style in design, with sturdiness in construction and modernity in equipment. These three combine to make a thoroughly good and satisfactory home.

homes



A HOME is first of all a place of higher satisfaction and better living. It is a blue chip investment of the first order which the owner can see, use and control for his own benefit. It is the safest of all investments because, next to food, it is the most basic necessity of life.

WHETHER THE COUNTRY goes democratic, republican or socialistic, or even if everyone goes on the dole, the essential value of a home remains unchanged.

THE STOCK MARKET may zoom up or down or break wide open, making many pretty pieces of paper worthless, but the value of your home as a place to live in and enjoy remains unchanged. Paper profits are exciting, but the benefits of home ownership are more lasting.

BUILD WELL, build carefully, and the house that soon grows into a home will pay a lifetime of dividends.



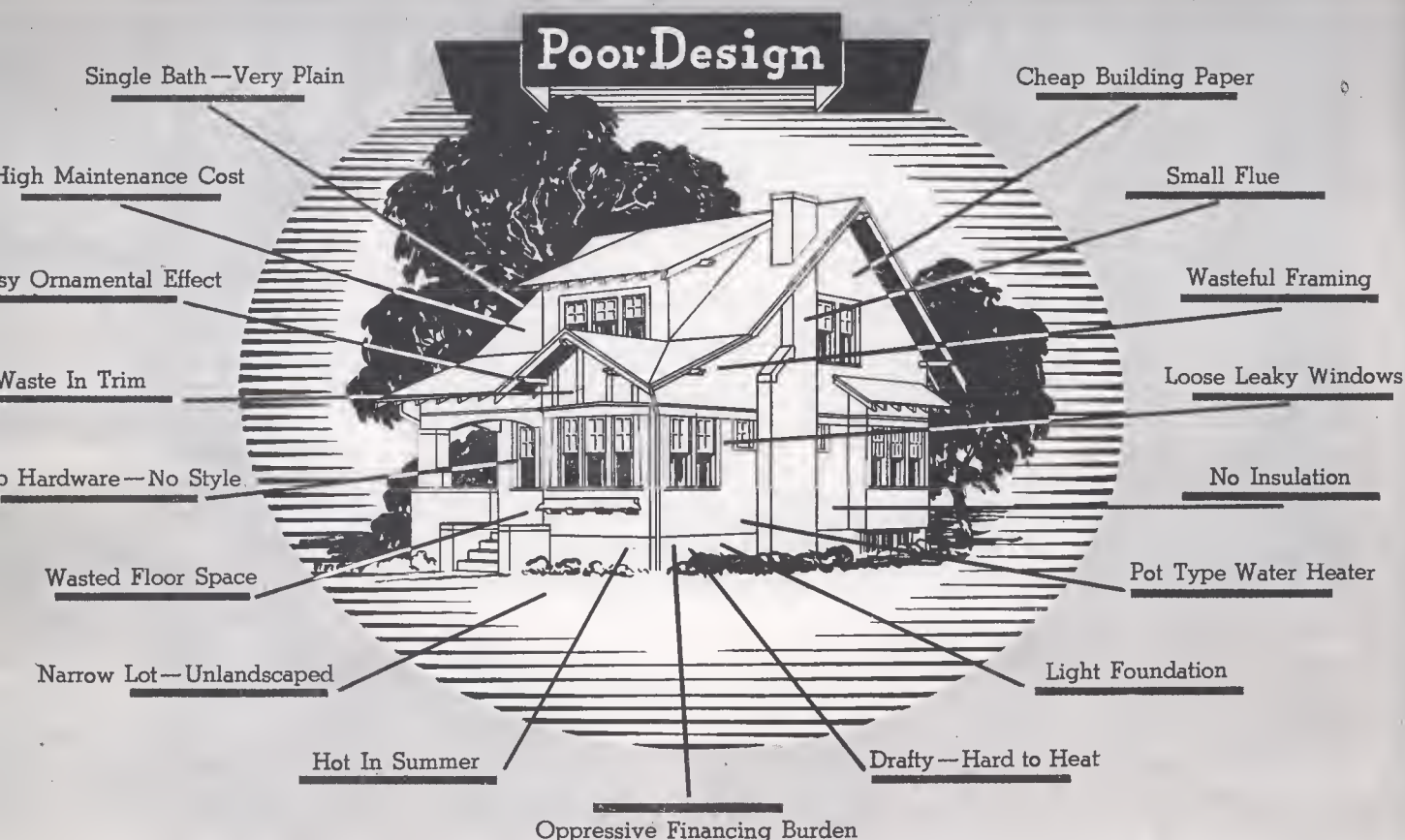
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CHAPTER I

VALUE IN TODAY'S HOMES

Pictograph Analysis Shows Impressive Popular 1926-29 Home

(25 to 40% Higher Cost)



1926-29 homes were expensive . . .

THERE IS AS MUCH DIFFERENCE between the home of today and the 1926-29 house as there is between the Model T Ford and today's V-8. Just take a look at the popular house of 1926-29 above—it was an advance over previous years, but pretty expensive and poorly equipped in comparison with the high standards of 1938.

THE 1926-1929 HOUSE COST MORE to build, and it cost more to operate. Land, labor, materials, financing costs and profit were all greater than today.

AS TO VALUE AND COMFORT, just hark back a decade and note some of the features we did NOT have then. HEATING—was non-automatic—boilers and burners did not have the efficiency of today—no air conditioning,

insulation—very little automatic equipment. KITCHENS—none of the gleaming, scientific, labor-saving devices of today—few cabinets—small storage space. CLOSETS—too few and frequently dark, deep and difficult.

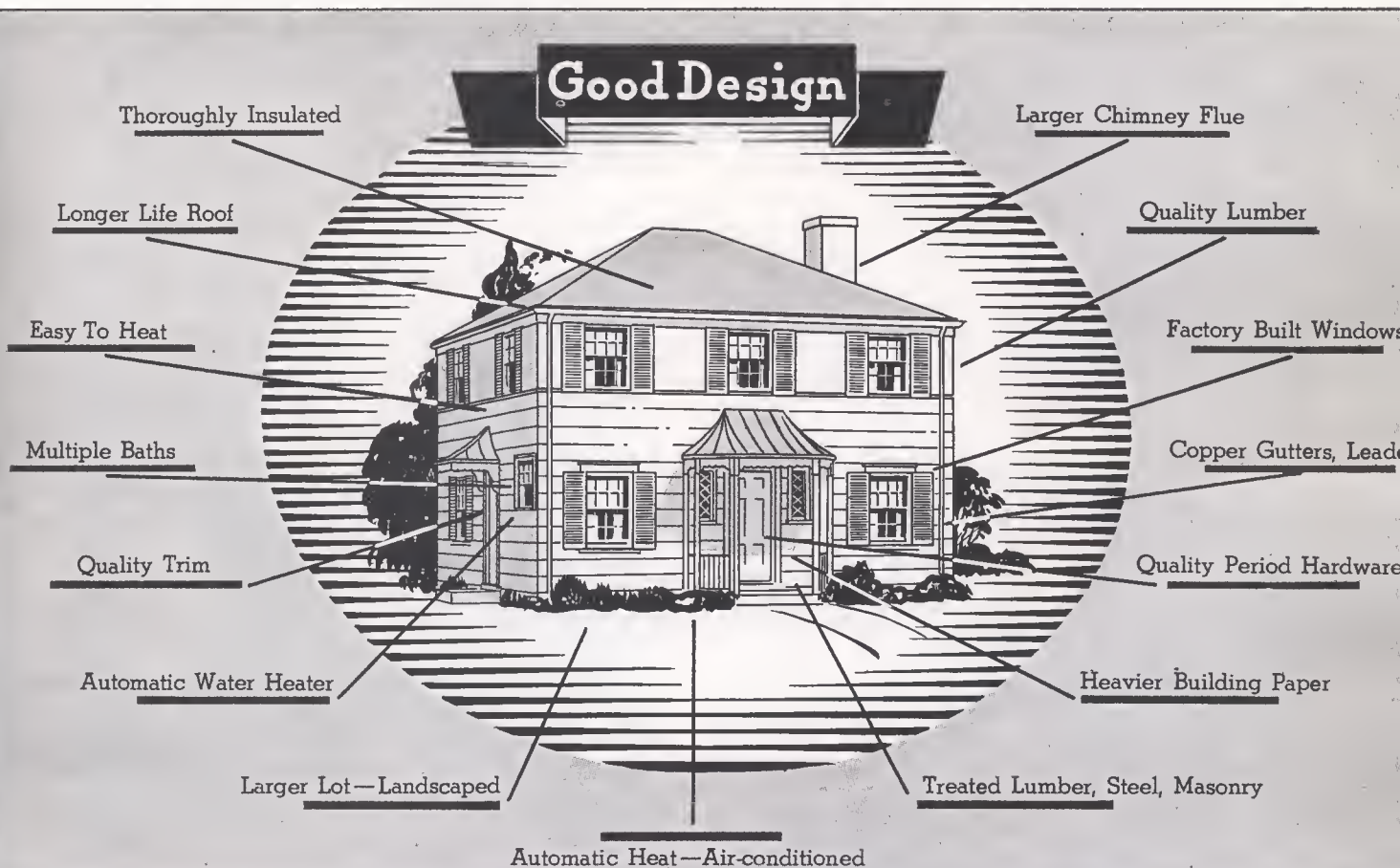
PLUMBING—USUALLY ONE BATH ONLY, and that quite plain. Little use of copper and brass pipe. INSULATION—few houses were properly insulated, and materials of insulation were not as scientifically developed as they are today. FLOOR PLANS—rooms were frequently boxy, with space wasted—poorly lighted—an architect was seldom used.

CONSTRUCTION—insufficient importance was given to heavy foundations, heavy building paper, tightly built windows, plaster cracks, time-resisting materials.

Increase in Home Values Since 1926-29

Efficient 1938 Home

(25 to 40% Greater Value)



1938 homes have high value . . .

CONSIDER NOW THE HIGH VALUE HOUSE of 1938. It is scientifically planned, and packed with improved labor-saving, comfort-giving features and equipment. Even though such items as air conditioning, insulation, step-saving kitchen, streamlined bathrooms, have been added, its total cost is still less than 1926. And maintenance cost has practically been cut in two.

BUILDERS ARE MORE EFFICIENT TODAY—use modern power equipment—employ good architects—waste less floor space—figure a smaller overhead and profit.

INSULATION—walls and ceilings thoroughly insulated with improved, scientifically developed products—weather-tight construction—greater use of heavy building paper—tight factory-built windows—weatherstripping.

TODAY'S HIGH VALUES INCLUDE: HEATING—automatic, highly efficient, healthful, attractive—air conditioning—concealed radiation. KITCHENS—pleasing—sanitary—efficient—cabinets to save steps and work—laid out and built scientifically.

PLUMBING—COPPER AND BRASS PIPE—beautifully styled fixtures—two and three bathrooms.

FINANCING—THE 1926-29 HOMES were burdened with an oppressive load of initial and continuing financing costs—second and third mortgages, land contracts, bonuses, renewals. Today's method costs 85% less.

FLOOR PLANS—compact, convenient, efficient—builders spend more time on planning.



More House TODAY for The Money than in 1926 or 1929

THE best answer the building industry can make to current criticism of high building costs is that 1938 home builders—in spite of rising costs—are still giving more value than they did in 1929.

This is a fact that few people realize. The industry is building better homes today and giving far more for the home building dollar than in either 1929 or 1926. Building men should take it upon themselves to publicize this fact. The cost of building materials and building labor has advanced so that they are very nearly up to 1929 costs. Yet when the improved equipment and construction of the 1938 home are taken into account, the value of today's house is easily one-third greater than for a comparable house built in 1929. If 1926—which is the "normal" year selected by most government departments—is taken as a base, the comparison is still more favorable. A \$6,000 or \$7,000 house today is infinitely better planned, better built and better equipped than a house costing several thousand dollars more in either 1926 or 1929.

Any builder can prove this to his own and his customer's satisfaction by a survey of his own town. Look up some of the houses built during those years, get a picture, list the rooms, list the equipment, note the con-

struction features and compare the price with a similar type house of today. The result will be a strong sales weapon to meet the complaints about high building costs.

After all, it is hardly fair to state that "building costs are too high," as many critics recently have, without setting up some base or standard of comparison. They may be too high for some particular individual's pocketbook if he insists on having the complete modern equipment most Americans now demand. But they certainly are not high in relation to the cost of a finished house and lot as priced in 1926 or 1929.

A study of the comparative values in houses in 1926, 1929 and 1938 has been made by *American Builder* in several localities including the metropolitan areas of New York City. Prominent builders who have been operating during these years were interviewed and the files of local newspapers studied. The study shows, beyond question, how vastly better planned, better built and better equipped the homes of today are—and at less cost. In May, 1926, six-room "low priced Garden Homes" were advertised in the New York papers at \$8830. Houses at Laurelton, Long Island, on 30-foot lots, were advertised for \$7990. Amherst Homes in

Hempstead, which were small, high and narrow structures of six rooms and one bath, on 40-foot plots, were advertised at \$9500. Houses of the same approximate size but vastly better planned and equipped are being sold today for a great deal less than these figures.

Turning to the newspaper advertisements of 1929, we find seven-room Spanish style houses in Great Neck, Long Island, with only one bath, and a lavatory in the basement, selling for \$15,950 (part of this price may be accounted for by the fact that a \$4700 second mortgage was required). At Hollis, Long Island, Rodman English Company sold six-room houses on 30-foot lots for \$9800. In Yonkers, Kimball Construction Company advertised six-room houses with one bath (and lavatory in basement) for \$13,500. A builder in White Plains



Amherst Homes HEMPSTEAD

At Washington Ave., cor. Clowes Ave., Adjoining Beautiful Garden City

Complete Homes in a Complete Town. No assessments to Worry About. All Improvements, 60 Foot Street, Water, Gas, Electric, Sidewalks and Curbs. Built on Plots 40x125. Sample House Open Daily and Sunday for Inspection.

Price, \$9,500

6 Rooms and Bath. Enclosed Porch, Shower Bath, Parquet Floors, Steam Heat; Decorated to Suit. GARAGE.

Amherst Construction Co., On Premises Daily and Sunday

Take Long Island R. R. to either Country Life Press Station, or Hempstead Station. Walk East to Washington Ave., thence to Clowes Ave., or Bus from Jamaica. Telephone or write for circular.

AMHERST CONSTRUCTION CO., 3290 ATLANTIC AVE., BROOKLYN, N. Y.
Telephones Applegate 3000 or Hempstead 1954.

COMPARE this 1926 value with today's modern homes

LIVE In a Home You'll
Be Proud to Own
BUILT BY UNION LABOR
Beautiful One Family
Detached Homes
in an exclusive
Residential Community
HOLLIS, L.I.

SEWERS
In and Paid for.
Connected with
City Sewer System.

Paved Streets
From
Curb to Curb

BUILT ON
PLOTS 31x100
Shrubberies
Trees
Lawns

LOCATED ON 202D STREET
Just South of Hollis Ave.

Model house furnished by Plumber's Union, Local 100, and Electrician's Union, Local 100, Hollis, L. I., N. Y.

OUR BOND
We are builders of long experience and stand squarely behind every house we build. Every buyer receives our bond guaranteeing his home against any defects in workmanship or materials for one year. This bond applies to any home you purchase from us, regardless of price.

Redman & English Building Corp.



Price \$9,800—Small Cash Payments

CONSIDERED a bargain in 1929, better houses of today are offered at a third less

offered to "sacrifice" his nine-room house, on 100-foot lot, for \$32,000. These are just a few of the prices that can be found by going through any of the real estate pages of those years.

Because prices of houses in different communities vary so widely, it is difficult to prove the price differences in 1926 and 1929 as compared with 1938. But there can be no doubt about the difference in construction and equipment. Houses of today are vastly better planned so that the floor area does more work. There is a minimum of waste space, more livability, more light and air. Construction standards and methods have improved and a host of new and improved products have contributed to these better houses of today.

To illustrate, there is more copper flashing, copper and brass pipe, life-time roofing, grade and trademarked lumber, quality paint, improved plaster and plaster bases, improved factory-built windows, weatherstripping, wider use of waterproofing, fire and decay resisting products.

Houses are placed on larger lots—the old 30- and 40-

foot lots are practically ruled out. Progress is being made in placing the houses on winding, better laid-out streets, with more landscaping and more regard for sunlight and prevailing winds.

Spectacular advances have been made in insulation and in insulating products of all kinds. Few houses today are without some form of insulation. This great improvement was a rarity in 1926 and had made hardly a dent in the popular market in 1929.

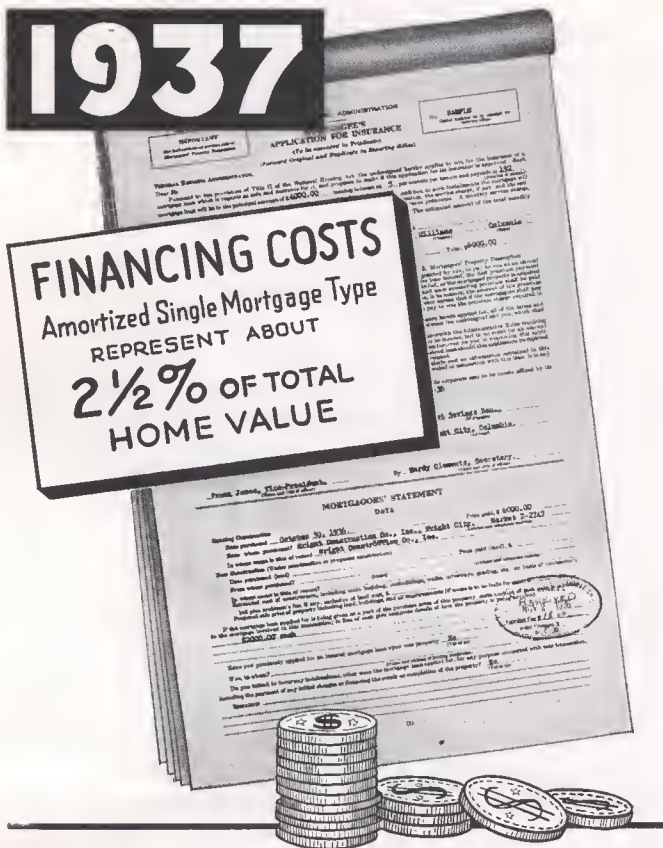
The most impressive advance has taken place in home equipment. Automatic heat, air conditioning, concealed radiation and a host of similar improvements have become standard practice. Even homes in the very lowest brackets today are being equipped with a type of heating or conditioning plant that was an impossible luxury for the mansion of 1926.

Like the automobile, the 1938 model home is a vastly more complex machine than earlier models. Electrical wiring equipment and the number of outlets have been increased. The 1938 kitchen has extensive cabinets and work areas, electric and mechanical equipment, sanitary work-saving construction. There are more costly materials used and more value given than in '26 or '29.

Many other types of equipment are standard today that were not included in homes of earlier years and still are unheard of luxuries in the European homes that are so often mentioned by our social-minded housing reformers. These include automatic domestic water heaters, automatic garage door equipment, telephone conduits, modern lighting fixtures and period hardware, streamlined bathrooms with elaborate fittings and equipment. When all of these items of modern equipment and superconstruction are added up, the only wonder is that the cost of the 1938 house is not greater than that of 1929 or '26.

Hold Prices Down—Increase Volume

American Builder, along with every other institution that has the welfare of its industry at heart, deplores the recent increases in labor and material costs. In an editorial in the March, 1937, issue entitled, "Cutting Our Own Throats?" it was stated that too sharp increases would hurt the industry. This prediction has unfortunately proved true. The only course for the building industry is the one that has made the automobile and other great American industries successful, which is to continue to give more and more value for less and less money. The history of the building industry shows that every time prices have advanced too rapidly, volume has fallen off. The home builder today is more than ever in competition with automobiles, radios and a host of efficient mass-production industries clamoring for the prospective home buyer's dollar. Nevertheless, such facts as have been stated above concerning the real value of homes today as compared with 1926 and '29 should be kept before the public. The 1938 model home is a far more complex, complete and costly structure than has ever been produced before in this or any other country, and it is available now at less cost.



FINANCING of a \$10,000 home today would cost, on the basis of an \$8,000 80% FHA loan, \$234 including a commission of 2½% amounting to \$200, an appraisal fee of \$24 and a survey charge of \$10. The total amounts to approximately 2½% of the \$10,000 home valuation as compared to former costs ranging from 6% to 15%.



UNDER the old first and second mortgage system, the original cost of 80% financing—exclusive of renewals and on a conservative basis of a \$5,000 first and a \$3,000 second mortgage—would have been about \$600. Land contract financing with \$1,000 down on a \$10,000 property frequently ran as high as \$1,500 for the original money cost.

Why Present Financing Costs Allow Increased Home Values Today

By R. E. SANGSTER

THE primary purpose of this article is to show that a smaller portion of the building dollar is being spent for financing costs today than during the period preceding 1929; more value can be built into houses as a result of these savings. It is not the intention to go into a condemnatory tale of some former practices which everyone now realizes were unsound, nor will it be concerned with a lengthy discussion of present day methods and questionable changes in them—some sound practice existed formerly although not usually the case, and at present there undoubtedly still are cases of bad financing. The comparisons made in this article are between common practices then and those which are most prevalent in new residential financing today.

THE TRUE importance of financing as a factor in home building is now being fully realized by those concerned—the individual home owner, the professional builder, and the building industry at large. Along these lines it has been pointed out that if a sound mortgage program based on amortization, as is now the case, had been generally adopted twenty years ago, a great body of home owners would not have lost their properties through distress, builders and lending agencies would have been in a better position during the deflationary period, and home construction could have been better sustained during the recent depression. Former practices involving first and second mortgages and land contracts proved to be an insurmountable triple threat to safe home ownership, and over a recent period of time many builders, lenders and owners sustained terrific losses, notwithstanding the high money costs and high interest rates which were in effect.

In looking at the financing situation, three factors are involved; first, the original cost of securing building money (most important to the immediate question of values); second, later costs of refinancing which involved the hazards of home ownership due to uncertainties

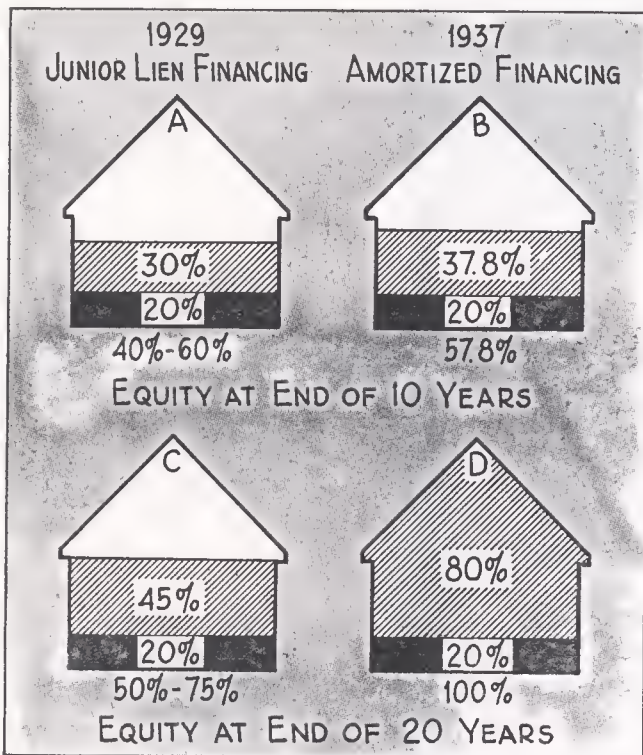
and availability; third, the rates of interest charged and the methods of principal payment which, unless on a sound basis, prove a constant menace to any sound building program.

A large part of today's increased home values results from savings in original financing costs, the first factor. Those dollars spent to pay excessive money costs could not be used for better materials, more equipment, larger sites and improved plans. There were many such dollars involved in the prices of 1929 houses—from 6 to 15 per cent, or from \$600 to \$1,500 in a \$10,000 home property, having been a common charge for original financing. This is pictorially presented in the illustration on the opposite page. It isn't too difficult to recall when contracts were sold at 40 per cent discount and when 15 to 25 per cent commission was charged on 3 to 5 year second mortgage financing. Such practice was common on homes in which the original equity was less than from 40 to 50 per cent; two-thirds or more of the homes purchased required junior financing.

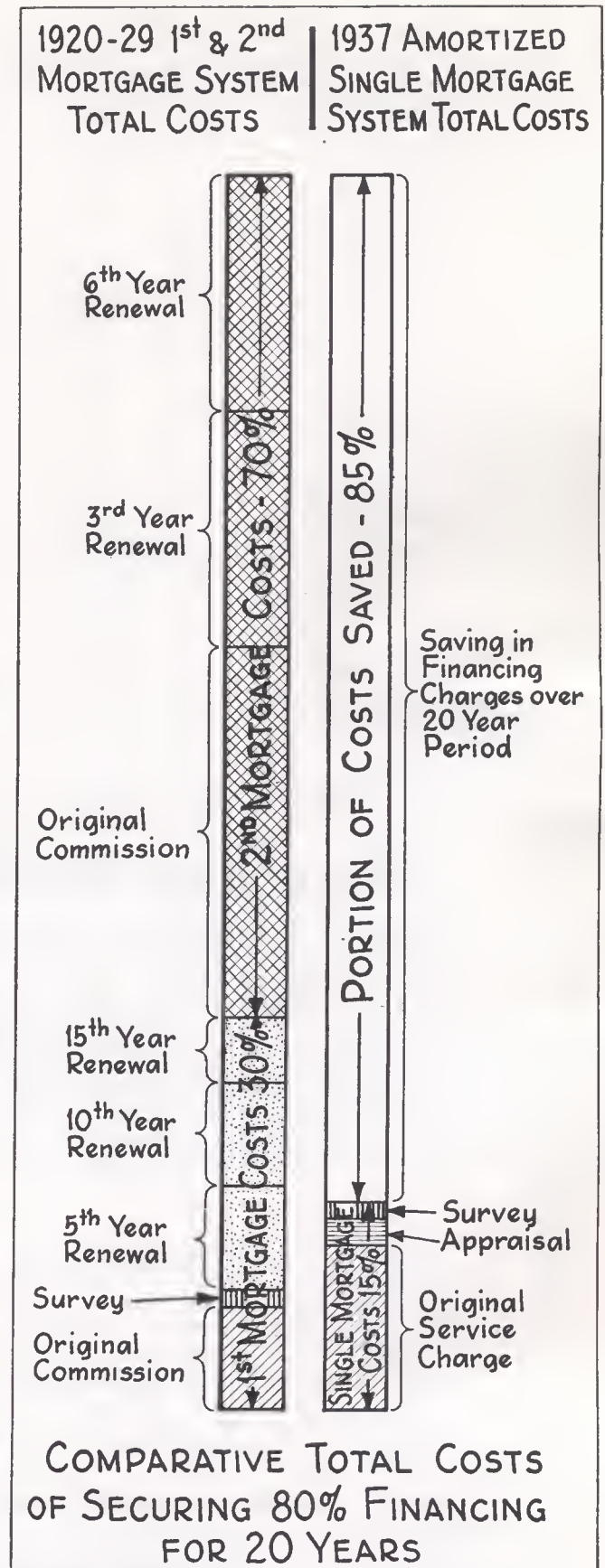
The President's Conference on Home Building in 1932 reported that "the risk inherent where the owner's equity is small requires a high rate of return to the second mortgage lender. * * * This results in a padding of the original purchase price; for example, a house sold for \$8,000 with a nominal down payment, say of \$200 to \$400, might be obtained in many cases for nearer \$7,000 cash, or cash and a conservative second mortgage."

Today the cost of securing 80 per cent financing on this 8,000 property would probably be less than \$200. In other words, about 10 per cent more actual value could be built into this house as a result of the saving.

The second factor involved is the matter of refinancing costs which occurred at very frequent intervals under the old plan. Often this was not duly considered at the time of purchase, but home owners found that, expensive though the first cost of securing mortgage money might



OWNER'S EQUITY at the end of 10 and 20 years under the two types of financing is indicated by shaded portions of the houses (original equity of 20% shown darker); percentage average ranges under 1929 houses express former uncertainties and indefiniteness.



ABOVE: Left hand column is proportionately divided into 1929 cost segments to represent a conservative estimate of typical 50% 1st and 30% 2nd mortgage original and refinancing costs which might have been paid during a 20-year period on a \$10,000 property. Right hand column is divided to represent comparable costs today for 80% 20-year financing, now secured at a saving of about 85%.

have been, over a period of years the cost of refinancing amounted to several times as much.

The larger chart on page 15 shows how these mount up in a typical case of a \$10,000 house in which there is a 20 per cent equity and the financing is to run for twenty years. In this instance, present day financing methods as compared to former practice might save the owner about 85 per cent of the total money cost. This is purely hypothetical because, under the old system, there was no way of knowing just what would happen within the first twenty years.

Finally, this element of uncertainty as to the amount of equity owned at any one time has now been definitely removed to the benefit of all concerned. On the preceding page, a diagram based on a \$10,000 home illustrates this. The same equity of 20 per cent has been used in both cases. The mortgage financing, as under the 1929 system, is represented by a \$5,000 first and a \$3,000 second. Under the amortized system, there is an 80 per cent \$8,000 single mortgage. House A (1929) shows that at the end of ten years the total equity might range from 40 per cent to as much as 60 per cent providing the second mortgage had been paid off after two three-year renewals and possibly the first had been slightly reduced; 50 per cent (original 20 plus 30 in ten years) is assumed as a liberal average. On House B (1937) there has been paid off exactly 37.8 per cent of the mortgage, making a total equity of 57.8 per cent. Houses C and D show the equities at the end of twenty years under both systems.

While interest rates might not directly affect the orig-

inal home value as delivered, they are important to both purchaser and builder because lower rates allow the same budget allowance for housing to be spent for more house and less interest. Due to an influx of capital, interest rates are now at an all-time low in many sections of the country. The following table shows the size of monthly payments covering interest and principal on a \$1,000 amortized loan within a range of rates for building money today:

Table Showing Size of Monthly Repayments on a \$1,000 Amortized Loan at Various Interest Rates					
Length of Loan	INTEREST				
	4%	4½%	5%	5½%	6%
5 years.....	\$18.42	\$18.65	\$18.87	\$19.10	\$19.33
8 years.....	12.19	12.43	12.66	12.90	13.14
10 years.....	10.13	10.37	10.61	10.85	11.10
12 years.....	8.76	9.01	9.25	9.50	9.76
15 years.....	7.40	7.65	7.91	8.17	8.44
20 years.....	6.06	6.33	6.60	6.88	7.17

Previously 6 per cent on first mortgages and 7 per cent on second were considered reasonable rates. However,

on second mortgages the rates as established at 7 per cent were fictitious due to discounting the commission. As an example, consider the rate paid on a typical second mortgage loan of \$2,000 over a period of three years at 7 per cent. The borrower received only \$1,700 after the commission was paid, and he pays on a principal of \$2,000. To repay this second mortgage in 36 monthly installments, these principal and interest payments would amount to \$61.80, with a total payment of \$2,224.80. In this case 15 per cent discount, or 5 per cent annually, actually adds more than 11 per cent to the normal 7 per cent. The difference that interest rates make can be readily seen by making a comparison of the columns in the table above. A 1 per cent reduction in interest rates buys 18½ per cent more house figured on an 18-year monthly amortized mortgage.

How to Save \$3,402.75
On a \$5,000.00 Mortgage

THIS WAY

- 1. You borrow \$5,000.
- 2. You reduce the principal \$50 every 3 months.
- 3. In 25 years you pay only \$3,472.25 in interest at 5%.
- 4. In 25 years you owe nothing.

COST.....\$8,472.25

NOT THIS WAY

- 1. You borrow \$5000.
- 2. You don't reduce the principal, but let the debt run.
- 3. In 25 years you pay \$6,875.00 in interest.
- 4. 25 years have passed and you still owe \$5,000.

COST.....\$11,875

DIFFERENCE, \$3,402.75

The secret lies in reducing the principal. Thus each succeeding interest payment becomes smaller.

It's not too late to start. If your property is in Brooklyn, Queens or Nassau County we will gladly consider your application. The flexibility of our new mortgage policy permits a wide choice of amortization plans. No renewal fees or bonuses—lowest initial cost. Payments monthly or quarterly. Periods from 3 to 20 years. Send for our new booklet, "Four Ways to Borrow Mortgage Money."

TUNE IN
WMCA
"At the Top of the Dial"
Monday
Wednesday
Friday
At 6:25 P.M.

The Dime Savings Bank of Brooklyn

DE KALB AVENUE AND FULTON STREET
Bensonhurst: 86th Street and 19th Avenue
Flatbush: Avenue J and Coney Island Avenue

BROOKLYN, NEW YORK

Assets Over \$213,400,000 * Established 1859

LEFT: Reproduction of newspaper advertisement, shown in reduced size, which points out the difference in financing costs when borrowing \$5000 on an amortized basis as compared to unamortized loan practice. The Dime Savings Bank of Brooklyn is a leading home financing institution in New York area.

PLANS AND DETAILS
ON PAGES 18 AND 19

THIS STRIKING VIEW of an entrance to a modern home displays some of the advances in home construction during the past decade. The house was built in Scarsdale, a suburban development near Chicago, by W. C. Tackett, Inc. A combination of new and old materials—painted common brick walls and a glass block panel to light the stairwell—have been used in a pleasing modern manner. Details of design such as cornice and fascia trim, brick coursing and entrance canopy are very well handled.



SELECTED DESIGNS THAT OFFER MORE HOUSE FOR THE MONEY

A Record of the Progress Made Toward Better Home Values Which Offer More Livability and Better Appearance at a Reasonable Cost. They Demonstrate the Truth of the Phrase "More House for the Money Today."





THIS 1937 HOUSE ABOVE SOLD FOR ALMOST \$2000 LESS THAN THE 1928 HOUSE AT THE LEFT. Both were built by W. C. Tackett, Inc., of Chicago, and are located in comparable neighborhoods. This modern type has six rooms as compared to five in the English style. The latter is typical of a class of moderately priced suburban homes built then. Dollars which were spent for stone trim, waste cubage and less efficient layout now buy extra value as shown in the plans opposite and the features which are listed below.

Modern Efficiency Home

Designed and Built by W. C. Tackett, Inc., Chicago. Located in Suburban Scarsdale

THE quality and value found in this modern house are indicated by the following features:

Dry basements guaranteed by waterproofing and drain tile around all footings.

Recreation rooms paneled in knotty pine, with wood-burning fireplace.

Number one lumber used throughout.

Insulation—Celotex "Vaporseal" and rock wool.

Thick butt asphalt shingles laid over 15-pound felt.

Garage attached, heated, McKee overhead door.

Woodwork—finest quality, 1 $\frac{3}{4}$ " thick windows and

1 $\frac{3}{4}$ " thick doors. Metal weatherstripping with bronze interlocking thresholds.

Metal lath ceilings and corners; U. S. Gypsum cement plaster. Tiled floors and walls of bath with porcelain accessories.

Electric ventilating fan in kitchen; reversible type.

All wiring in rigid conduit.

Electric fixtures by Victor Pearlman and Lightolier.

Plumbing fixtures by Kohler.

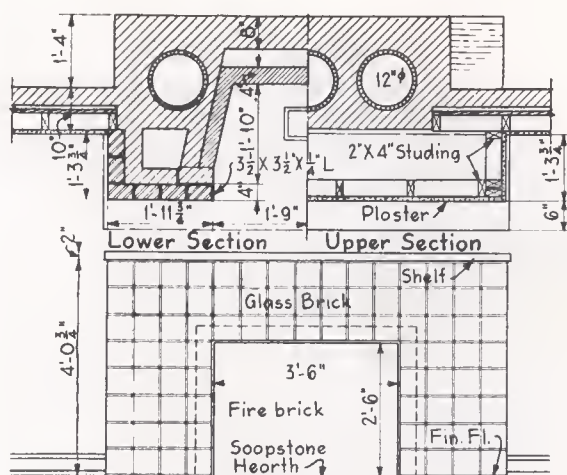
Automatic hot water heater.

American Radiator's "Sunbeam" air conditioning unit; complete change of air every 12 minutes.

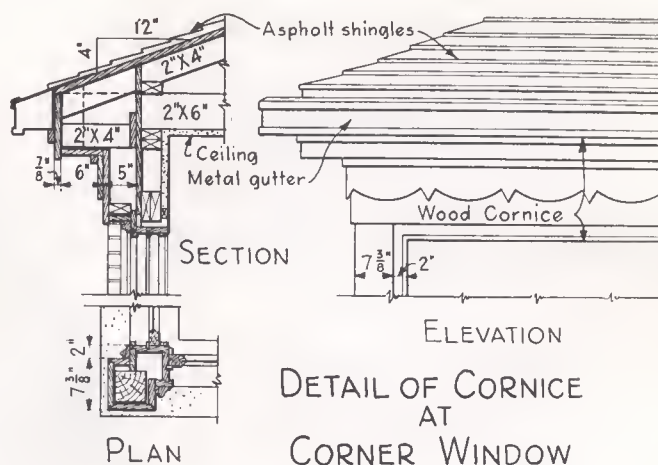
Solid brass hardware by Corbin.

Bronze screens, Bontex shades and Armstrong linoleum.

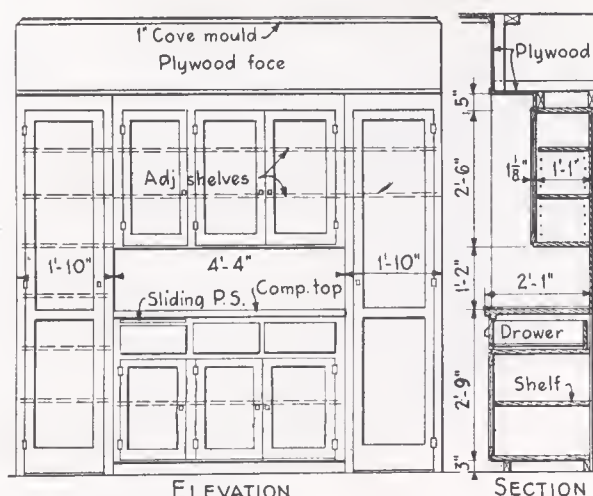
All painting 3-coat work, using highest quality workmanship and materials; color schemes by a recognized interior decorator.



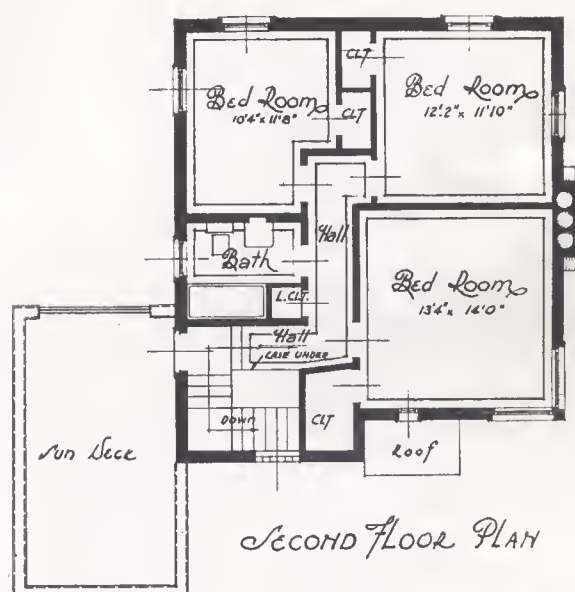
LIVING ROOM MANTEL DETAILS



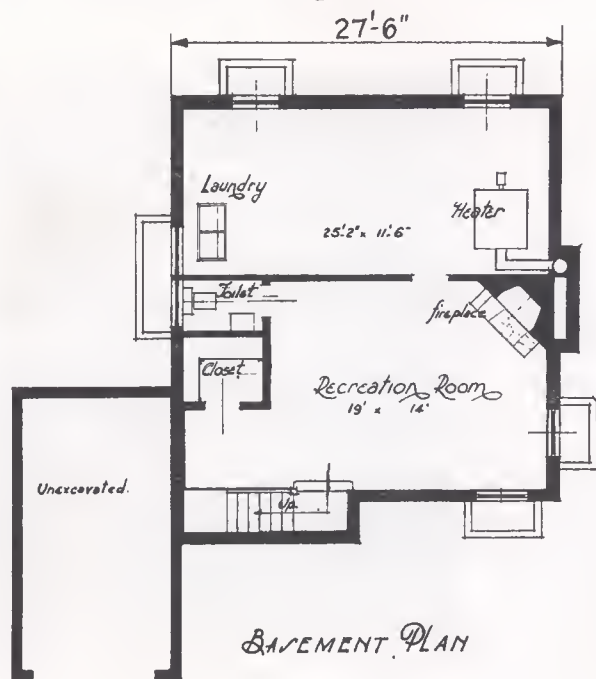
ELEVATION
DETAIL OF CORNICE
AT
CORNER WINDOW



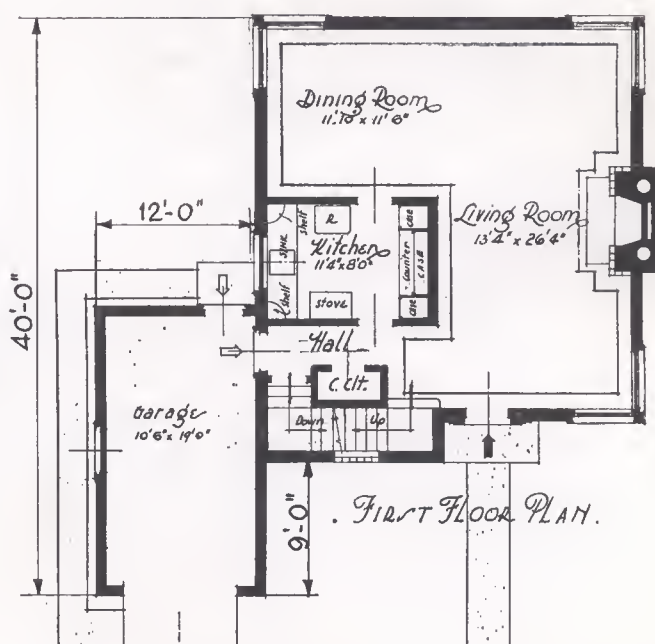
ELEVATION
KITCHEN CASE DETAIL



SECOND FLOOR PLAN



BASEMENT PLAN



First Floor Plan.

Front Cover Home Illustrates High 1938 Value

**Four Bedrooms, Two Baths,
Large Living Room, Down-
stairs Lavatory, Excellent
Room Arrangement, in
Cubage of Only 27,750.
Cost Estimated at One-
Third Less Than 1929**

OUR front cover home, nestling in the New Jersey hillside near West Orange, is an excellent example of the high value set in the 1938 home by architects and builders. It was designed by Rowland C. Hunter of New York, who has created thousands of home designs and is one of the well known specialists in this field. It was built by Julian Leadbeater of Maplewood, N. J., a builder of long and sound experience. Here is a house built on speculation early last year which contains 4 good bedrooms and 2 baths, a large living room, dining room, breakfast alcove, downstairs lavatory and an excellent arrangement of rooms. Yet the cubic contents are only 27,750 feet.

This is an illustration of what Architect Hunter describes as "getting more usable area out of a given amount of cubage." In the past decade, Architect Hunter, like other men specializing in this work, has studied and restudied multitudes of plans to get the maximum amount from the building dollar. He points out that he and other architects who specialize in residential work are spending more time perfecting economical, livable, attractive designs. His plans are figured for the most economical use of equipment and modern materials without cutting or waste effort.

In contrasting this house with a similar type built in 1929, Architect Hunter says that the value is easily one-third greater. The actual dollar cost today is much less than 1929, but the contrast in construction and equipment is great. There are 2 large, beautifully appointed baths with colored fixtures and greatly improved equipment instead of the one very plain bath of 1929. There are 6 electric outlets in the kitchen alone, and for the house as a whole, a 50 percent increase in electrical outlets. This house is heavily insulated with rockwool, where a house of this type in 1929 was not insulated. There is a beautiful, efficient burner-boiler heating plant with concealed radiators, contrasted with the one-pipe steam unit of 1929. The kitchen of this house is a thing of beauty with elaborate, gleaming, modern cabinets and the entire kitchen laid out for efficiency, beauty and step-saving in a way unheard of in 1929.

Architect Hunter is an enthusiastic believer in the constant progress being made in home building. He believes that more builders are employing good architectural service and that the architects specializing in residential work are given more for the money than ever before. Because of the importance of fitting the complicated, modern factory-

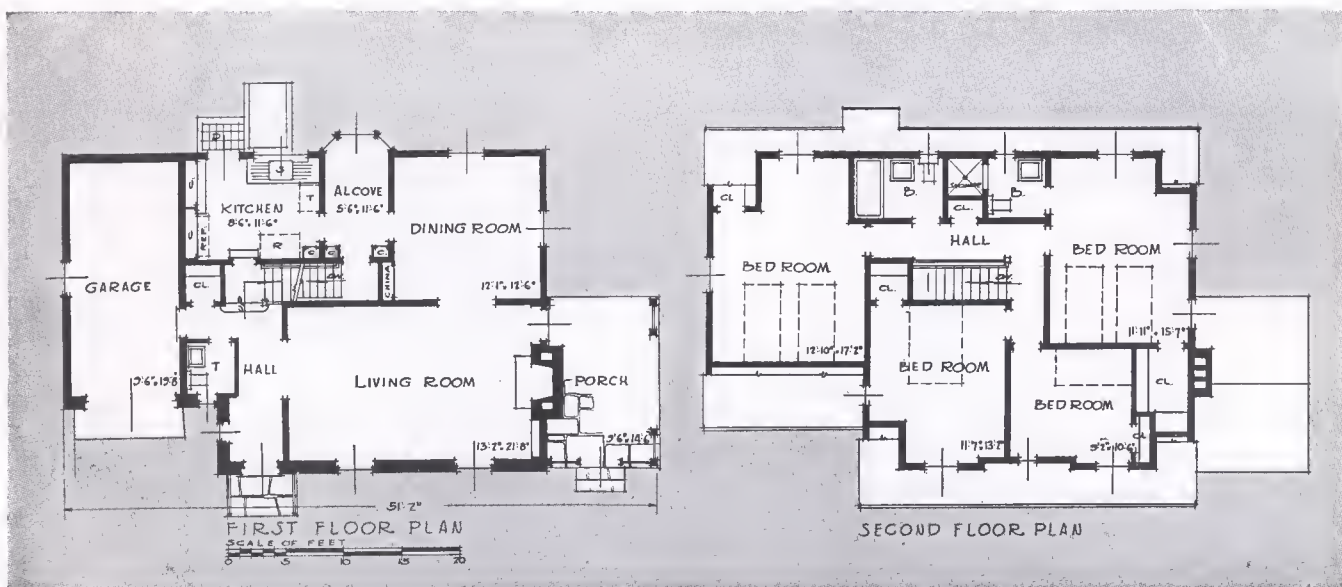


THE HOME of today represents tremendous advance in value, declares Architect R. C. Hunter, specialist in residential design, who describes better planning methods that help building.

Architect R. C. Hunter Shows Contrast with 1929 Homes. Tells of Better Planning Methods, Improved Equipment, More Efficient Use of Floor Space That Gives Higher Value at Less Cost.

built equipment into a house of increasingly smaller cubic capacity, more time and more skill is required by the architect, he points out. He says building materials manufacturers are providing a greater selection of good stock materials, trim, etc., in standardized size. These standardized units enable the contractor to use his labor to better advantage. The experienced builders who have come through the depression he believes are building homes today in a more orderly, well planned fashion with less overhead and a moderate profit.

All of which adds up to one outstanding conclusion—the 1938 home is better planned, better built and represents a great increase in value over the house of 1929.



FLOOR PLAN of the American Builder front cover home designed by R. C. Hunter and built by Julian Leadbeater at West Orange, N.J., shows how maximum use has been made of every available inch of floor space. There are four good bedrooms, two baths and a downstairs lavatory—an unusual value in a house of only 27,750 cubic feet content. In equipment, construction and layout, the house marks far-reaching progress in home values since 1929. It has 50% more outlets, insulation, modern kitchen, large rooms.



From "Shirt-

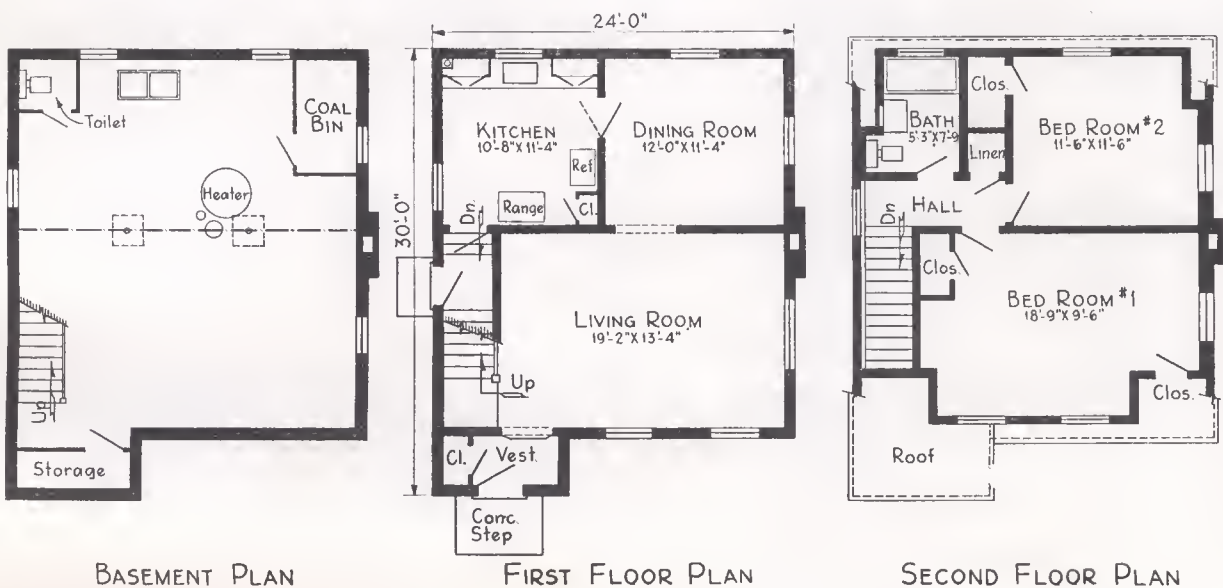
1938 Mills home (at left, plan below) offers many features which increase livability and add to attractiveness yet sells today for about 10% less than their 1929 bungalows.

1929 bungalow (below) built by Mills in their Westwood development indicates advances which assure increased value today through improved materials and better design.



Trim In Appearance— Efficient In Plan

House Shown Above: Built in Mills and Sons Ivanhoe Section, Chicago;
Designed by H. F. Mitchell, Chicago



Front" Bungalows to Distinctive Homes

Mills and Sons, Nationally Known Chicago Builders, Are Marketing Houses Which Show the Greater Values That Are Now Possible

DURING the years just preceding 1930 in Mills' Westwood subdivision, hundreds of homes were erected and sold—homes which, according to the standard of those years, were considered good values by the buying public. To compare these homes of a decade ago with their present houses forcefully bears out the truth of *American Builder's* theme, "More House for the Money Today." Prices are lower; greater values are possible; new materials and equipment offer new standards of convenience and comfort; better planning allows space economy.

A vast improvement in the relation of houses to each other is equally as important as the changes in the houses themselves. Following a nation-wide practice of the former bungalow era, houses which differed only in minor exterior details were placed close together on narrow lots. Now each house is individually handled in a pleasing architectural style—there is no mass production monotony—and building sites are now 50 per cent larger. As a result more light and air, more privacy, better appearing streets and individuality which leads to pride of ownership are offered today.

Comparing some of the highlight items of these new Mills houses with similar features of 1929 really shows the advances which have been made. For example, in 1929, face brick was used only on the front; now, on all four sides. No. 1 common framing lumber was used; today, precision cut, kiln-dried, pre-shrunk Southern

yellow pine, 12% moisture content is definitely specified.

Further typical examples of increased value include: Cast iron sewers instead of tile; winter air conditioner in place of boiler; Fenestra steel casements, inside bronze screens, double strength A glass, as compared to wood sash, single strength glass and no screens; all birch millwork replacing gum and birch. Before, old style pantries were provided, now Whitehead de luxe kitchen cases and base with 12-foot monel top and sink are used; there was no kitchen linoleum in 1929 houses; now, all kitchen floors are covered with Armstrong inlaid linoleum.

In the baths, ceramic floors and colored tile walls replace plaster; Standard colored, acid-resisting vitreous china fixtures are used instead of old white, non-acid-resisting enameled iron type; Lawco custom medicine case of first quality with lumiline lighting succeeds former stock models. Likewise, higher quality electric materials and custom fixtures are used instead of stock type; about four times as many outlets are provided; a Square D flush type circuit breaker replaces the old fuse box; kitchen exhaust fan is now installed; illuminated house number is combined with built-in mail box; a two-tone 5-foot tubular "Telechime" replaces buzzer.

With these and other items which offer greater value, Mills houses today sell for about 10 PER CENT LESS than their 1929 houses of similar size.

THE ROW of houses seen at the right shows street of bungalows all nearly alike in exterior and plan as built in 1929. BELOW, Mills houses today are on larger lots, and have neat styling. French style house has plan similar to that of Dutch Colonial on opposite page.





CATERPILLAR tractor with rotary scoop reduces excavation, grading and back-filling costs.



HIGH SPEED, light weight mixer can be inexpensively moved from job to job. Used by Whitson Improvement Corp., to cut costs.



THEODORE M. LAY, prominent builder, analyzes and describes current building practices that create high 1937 values.

Scientific Methods

40% More Value in 1938 Homes Built by Operative Builders Due to Better Planning, Modern Materials, Power Equipment, Greater Job Efficiency.

OPERATIVE BUILDERS of the country are building homes today that represent a 25 to 40 percent increase in value over those built in the 1926-1929 era.

This is a conservative figure, and there are numerous instances where the home built today in a planned residential community represents an even greater advance in value. The operative builder of today is doing a far different and far higher type of work than he did a decade ago. He is employing an architect and producing better designs; he is putting his houses in planned communities, on larger lots with high type roads and utilities.

Most important of all, the operative builders who are now most active are men who have had a sound background of experience in this field. In the past decade they have learned a great deal. During the depression they were forced to study their business methods more carefully. They now spend more time in planning, and as a result the houses are more compact, more efficient. They have been quick to adopt new materials—many of them prefabricated in factories which reduce time and labor spent on the job. They are using more power equipment of all kinds.

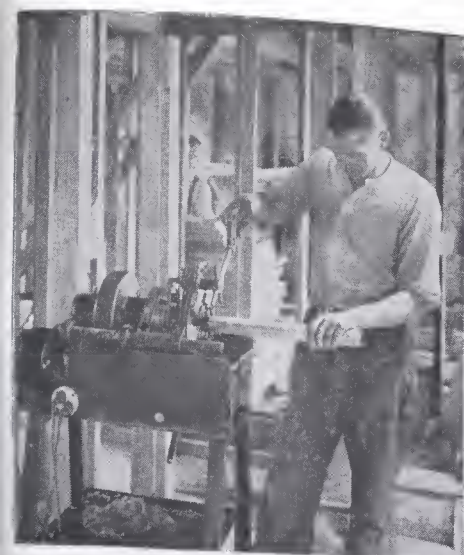
Keen competitive conditions have resulted in the ac-

ceptance today of lower profits by the builder. In most cases the acreage cost of land is much less than in 1926 or '29. And the operative builder of today is figuring only one profit—a reasonable one based on the complete job. A study of this important subject indicates that this one profit in many cases is figured as low as 8 percent—a very large reduction from the practice of the previous decade.

To illustrate the construction and planning methods that have resulted in such higher values in the 1938 home, *American Builder* has made a thorough analysis of the operations of a prominent Long Island builder, Mr. Theodore M. Lay, whose firm, the Whitson Improvement Corporation, is building an attractive home community in Monfort Hills at Port Washington, L. I. The accompanying construction and equipment photographs were taken on this job.

A thoughtful, well educated, experienced builder, Mr. Lay believes that the most important advance in construction progress is the creation of a complete community with each house properly planned for its surroundings, in which the operation is a well-rounded whole, including landscaping and trees.

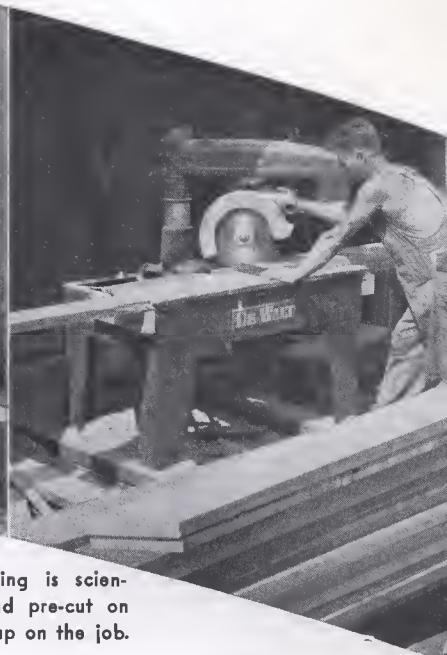
"Ten years ago in our territory, a community was



ELECTRIC pipe-cutting machine greatly reduces plumbing costs in the Monfort Hills homes of Theodore M. Lay's organization.



DUCT WORK for the air conditioning system is prefabricated in a local plant, accomplishing a good saving in installation costs.



LUMBER and framing is scientifically detailed and pre-cut on this power saw set up on the job.

Reduce Home Costs

More Gray Matter in the Office, Less Brawn on the Job Is Present Policy of Prominent Builders. Build Better Homes.

By JOSEPH B. MASON



THE Whitson-built houses rise from their foundations in record-breaking time because of speed and efficiency of builder

created by a land developer who retailed individual plots to contractors," Mr. Lay says. "Today a well financed operative builder does the entire job of buying the land, installing the improvements, building and selling the home—eliminating several profits on land and intermediate operations."

Lay believes a further economy is achieved by owning as much of his own equipment as possible and doing all the operations with his own men. "A sub must either make a profit or take it out of the work," he pointed out. "We have our own skilled workmen and do all our own carpentry, painting, excavating and masonry work."

The major Whitson Company equipment includes:

1. A DeWalt power saw, which is moved from house to house.
2. A T. L. Smith one-bag, $\frac{1}{4}$ yard, trailer type mixer that is easily moved from house to house and can be lowered into a basement when necessary.
3. A small Caterpillar tractor with rotary scoop, which does the bulk of the excavation, grading and back filling.
4. A Ford, $1\frac{1}{2}$ cu. yd., hydraulic dump truck.
5. A Toledo electric pipe cutting and threading machine.

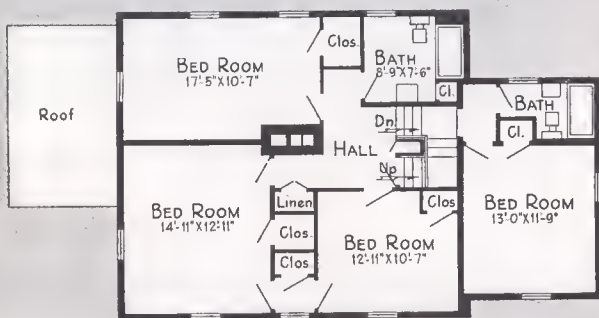
Because the building of every house is carefully planned and scheduled, the equipment is kept constantly at work and achieves a high saving in cost. The power saw performs an important function in cutting of all framing and lumber from carefully detailed plans. This leads to the important feature of *improved planning*, which Lay believes is one of the most important items in the reduction of cost over the methods of 1926.

"Most large builders today can afford to employ highly competent construction foremen who lay out the work progressively and efficiently, similar to the assembly-line planning of an automobile manufacturer," he says. "As soon as the plasterers are finished with one house, another is ready for plastering, and the lathers, who precede them, pass on to still another house. The work is progressively organized so that foundations, masonry, carpentry, electrical work, floor laying, roofing, painting and landscaping follow each other without loss of time or wasted effort. There is no lost time and this saving is passed on to the home buyer."

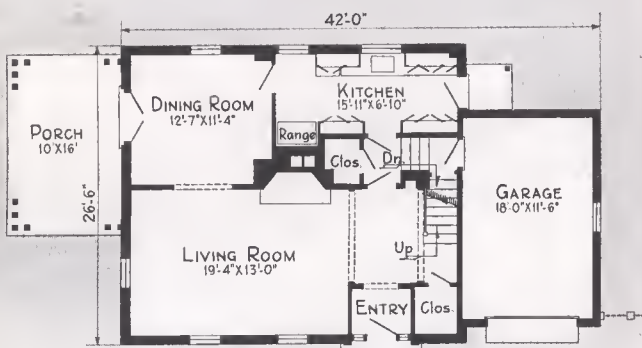
On the wall of the Whitson construction office is a large progress chart in which the building operations are indicated and a definite time set for each operation. When a contract has been signed the builder gives a date when



Cost \$4,500 Less Than 1926



SECOND FLOOR PLAN



FIRST FLOOR PLAN

AIR CONDITIONED, insulated, intelligently planned and finished, with a host of modern materials and items of equipment unheard of in 1926, this house—if it could have been built—would have cost \$4500 more in 1926 than it did this year. It was designed by Architects Kimball and Husted, and built by Whitson Improvement Corporation in its successful Monfort Hills Development.

it will be ready for occupancy. The foreman then fills in his time chart, working back from the completion date established. This means that every operation must be done strictly on schedule.

An experienced foreman lays out the work and estimates the number of joists, rafters and dimension pieces required. These are cut on the power saw by one carpenter who specializes in this work. An electric pipe cutting and threading machine is also used, and here again the foreman lays out the job so that the pipe is cut to exact size and will be installed without cutting or alteration of the framing. Similarly, the duct work for air conditioning is fully prefabricated in a nearby sheet metal plant and is installed with great efficiency and speed. The location of ducts and pipes is carefully detailed in advance to eliminate any unnecessary cutting or waste motion.

"This advance planning and precutting is one reason why the modern house rises so quickly from foundation walls to complete enclosure with what seems incredible speed to the layman," says Lay.

"It causes some of the old-timers to skeptically shake their heads and say 'they don't take the time to build houses the way they used to.' The fact is that today we use more gray matter on the drafting board and at the construction office and less brawn on the job," he declares.

Another economy in construction of the home today that was not prevalent in 1926 is the use of stock steel and wood concrete forms. Lay uses and reuses stock panel



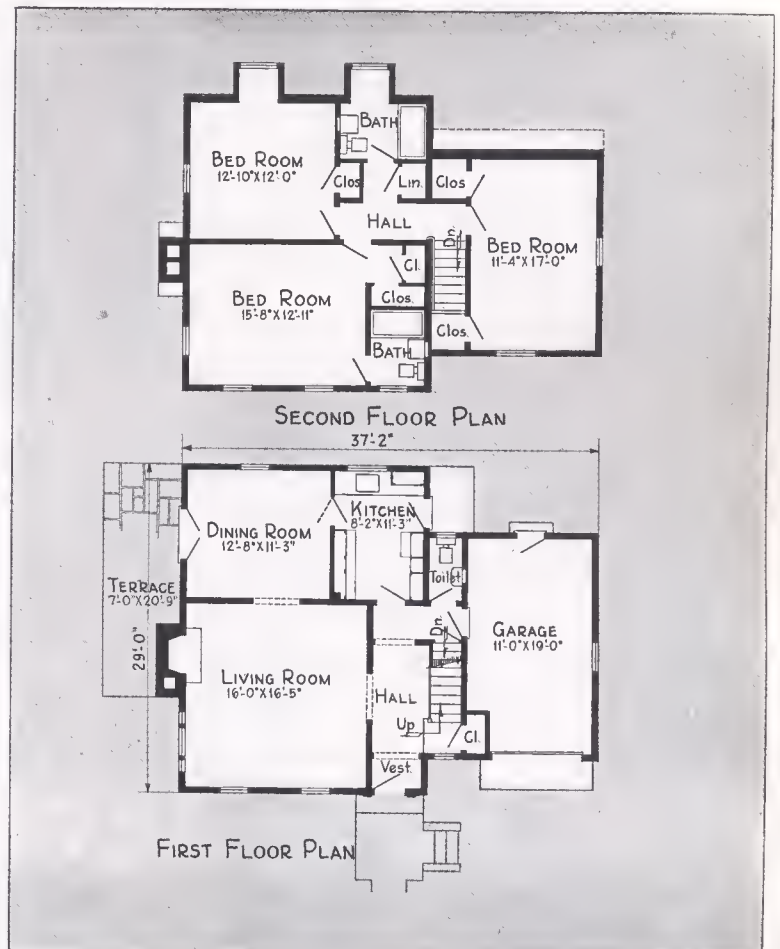
SCIENTIFIC methods make this attractive Colonial home Monfort Hills possible today at a cost \$2500 less than a similar home could have been built in 1926. Study of the floor plan below will show how the intelligent builder of today, employing a capable architect, is able to get the most out of enclosed space. This is an immeasurably better home than possible in 1926—and at a lower cost.

Foundations built of 1 x 6 T. and G. boards. He uses a wheel buggy in delivering concrete from the mixer to the forms and states that this use of buggies is four times as efficient as the former wheelbarrow method.

The house plans used by Whitson Company and other prominent builders also represent remarkable progress in home economy. Architects are employed who have some specialists in residential work and who adopt simple, rectangular floor plans that give the most effective use of space. At the same time, exteriors as well as interiors are in better taste because of the use of properly trained architects who know good design.

Outstanding in the reasons for the high value of the modern home is the perfection of high quality stock materials and equipment that are built in factories and installed on the job at a minimum of cost. A classic example pointed out by Lay are the kitchen cabinets which formerly were built on the job by the carpenter or done in a small local mill. Today the operator buys highly efficient steel or wood factory-built cabinets which come to the job complete with easy, hard-finished surfaces. A host of other products have had a similar development. More windows today, whether wood or metal are factory-built and come ready for quick installation. The heating equipment comes as a single, well integrated, efficient unit, vastly better and lower in cost than the assortment of parts that it was necessary to purchase a decade ago.

Cost \$2,500 Less Than 1926



Perfecting A Home Plan

Year to Year Improvements in Plans to Meet Trends in Home Buying Assure More Salability

By R. E. SANGSTER

IN planning a home to be built either on speculation or for an owner on contract, the importance of producing a structure which has the best sales possibilities has naturally been a principle of long standing. Operative builders have always had to plan with this in mind; the designs were changed from time to time to meet the market. More personal preferences have been included in owner-built homes and frequently to the detriment of the owner if the house was later put up for sale. FHA has recognized this and has made salability a prime feature of homes bearing insured mortgages.

The difference in planning for these two markets is illustrated by the houses on these pages which were developed from an owner-built house to a design for the operative market by the architectural department of W. C. Tackett, Inc., Chicago, building firm.

The Cotswold Cottage type house illustrated below was built in 1935 and represents the first step in arriving at the final design. It includes features demanded by the owner and built accordingly. Some of these worked out well; others could be and later were improved upon.

Let's follow the evolution of this house through three years of planning. Notice the basic characteristics of plan No. 1 in appearance and layout.

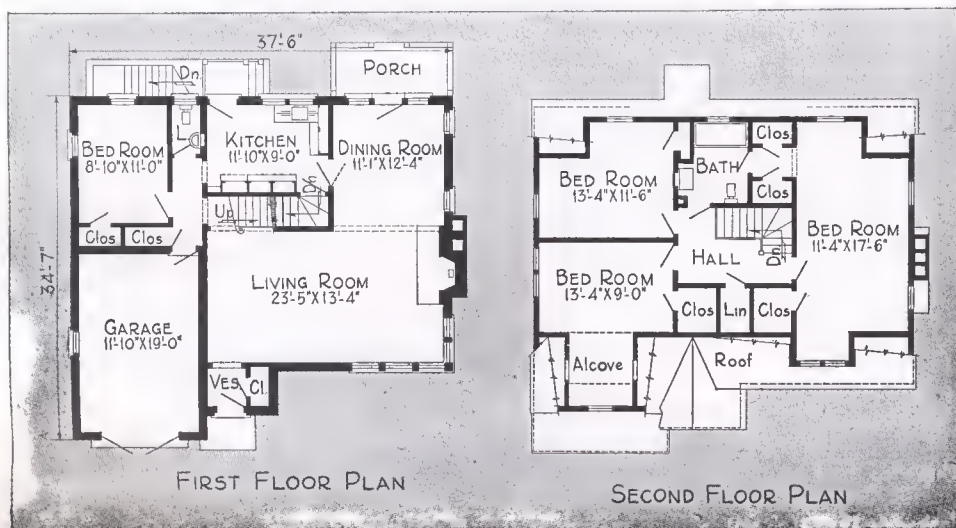
On the opposite page are perspective and plans of a house (No. 2) developed by this builder and erected for sale in 1936. It has many features in common with house No. 1 but was designed to appeal to a wider market.

The exterior retains the corner window treatment for good inside wall space. English detail was used on one house and for the same plan a Colonial exterior was also worked out as shown on the front cover and page 68, lower right; two of the latter were built last year, this style being more popular. The gable over the entrance

has been enlarged while the bedroom dormers were made of equal size and placed to balance the design. The attached garage, now an accepted feature, was included; however, it was pushed back and made less prominent.

In plan, the basement recreation room with fireplace was retained. Laundry and heater room are well placed; a single three-flue chimney for economy serves both fireplaces and the winter air conditioner. Storage space is convenient to the stairs and might be converted into a built-in-bar. In house No. 1 a beamed ceiling in the living room was obtained by using 4" x 10" beams 30" o.c. instead of 2" x 10" joists. The beams were left exposed and stained; above them, the second floor was laid of 1" x 6" T. & G. sub-floor stained on underside to match the beams; over this sub-floor 1" x 2" furring strips 16" o.c. supported the 7/8" oak finished flooring. This made an attractive ceiling treatment and gave the room increased height for better proportion without raising the second floor level. In the No. 2 house, this idea was used in both the recreation and living rooms of the English design, and in the recreation room of the Colonial design (see section in Plan No. 2).

Probably the most important feature of this house is the way the plan has been worked for circulation and



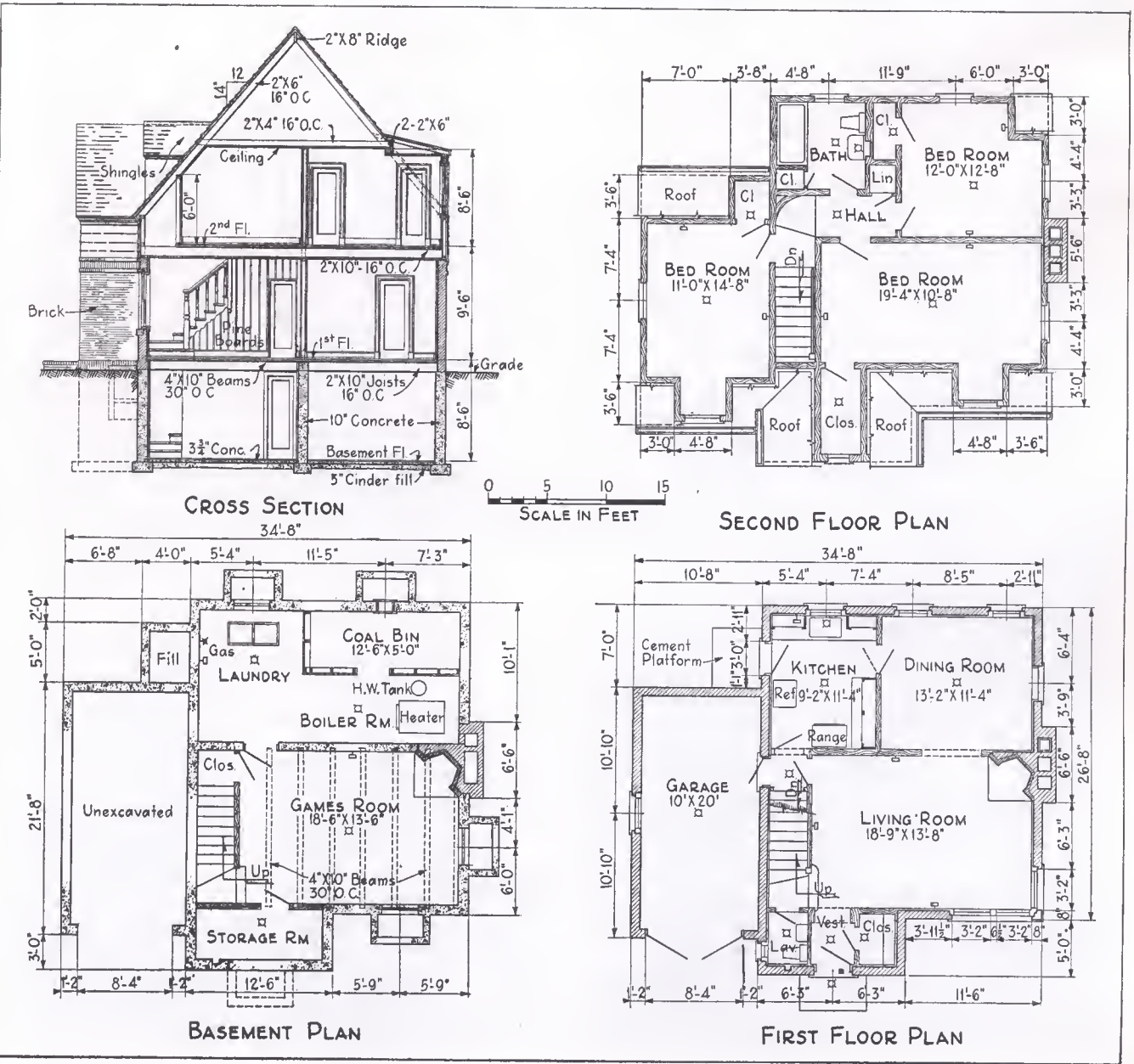
ABOVE: Cotswold cottage type home built on contract for owner in 1935. Garage doors and gable above overbalance smaller entrance detail.

PLAN NO. 1 at left shows certain basic characteristics of layout which were retained in later plans; the first floor bedroom was eliminated.

PERSPECTIVE at the right represents 1936 changes; one of the houses built last year retained English exterior design as shown on next page. Dotted lines indicate further 1937 revisions.

For presentation of this design in full colors see inside Front Cover.

PLAN NO. 2 below bears some resemblance to that of the first house. The stair placement and circulation have been greatly improved. Section detail shows the Colonial exterior.



access on the first floor. Compare plan No. 1 with No. 2 and notice the passageway area at the head of the basement stairs. Although the basement is easily reached from the kitchen, it is possible to get to the recreation room without going through the kitchen. From the garage, doors lead to kitchen, basement and living room; there is front door access from kitchen without going through dining room. This is an unusually good arrangement.

A first floor bedroom, although convenient for maid or guest, is not needed by the average buyer, so it was eliminated. Stairs were moved over to the end of the living room, closer to the front door, but the open plan without hall for maximum usable space was retained. The lavatory was placed off the landing where it can be reached from both floors. To determine the public reaction to the combination living-dining room, one of the 1936 houses was built as in plan No. 1 and the other two had a separate dining room. The latter arrangement was still found to be more acceptable to the majority of buyers and future houses will be built accordingly.

Three bedrooms, the number required by the average family, are compactly arranged on the second floor. The rooms are better proportioned and symmetrical. Hall space has been reduced. However, storage space is also considerably less but still as generous or better than that of the run of speculative houses in this class.

The third step in this evolution is plan No. 3, shown below, which will be built for the 1937 market. The plan very closely follows No. 2 and retains the good features of it, but has further changes which add much at a small extra cost. As shown by the dotted lines in the

perspective on the preceding page, the ridge will be carried straight across and the house squared out at the rear. Although this requires little more material for outside wall and roof, it adds useful cubage as indicated in the revised No. 3 plan.

On the first floor the extra space is used for a well lighted breakfast nook, a feature having considerable sales appeal. The wall cabinet is extended for more storage; refrigerator is placed conveniently but out of the way in a corner recess.

The archway between dining and living rooms is moved to approximately the center of living room wall to allow for better furniture grouping around corner fireplace.

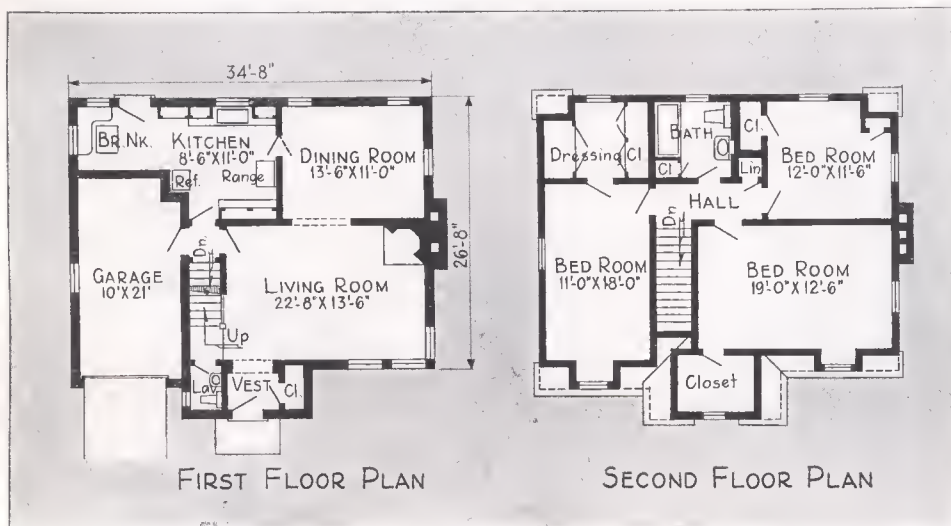
The changes which the additional space allows on the second floor are of even greater value. The bedroom over the garage is three feet longer, and to the rear of this, the space within the extended rear dormer is used as a dressing room with built-in wardrobes. The door of this bedroom is moved back so that stairs work out better. Also the front bedroom wall is moved forward.

As shown on the perspective, the gable over front entrance is raised so that the eaves are on the same level at the right side of the house. This enlarges the front bedroom closet to dressing room size. Exterior design is at the same time improved, considering the roof area which will be added at the ridge. This revision was made on the English house built last year as seen in the illustrations below and will be added to the Colonial this year.

The changes made in No. 2 to arrive at No. 3 will add about \$150 to the construction cost of the house. Certainly the livability and, consequently, the salability

have been increased beyond this sum. This method of arriving at a good plan is typical of the practice employed by important operative builders. Like that of motor car manufacturers, the process is one of experimentation and improvement toward a better product.

PLAN NO. 3 shows the latest changes which will be included in the houses built this year. The increased floor area over Plan No. 2 will require exterior alterations indicated by dotted lines in the perspective on preceding page. BELOW: Two houses built in 1936 (Plan No. 2); designs for this year are similar in appearance except for the changes mentioned above.





Modern Design That Is Beyond Comparison

Practical Planning Technique and Improved Materials Have Created New Standards of Home Comfort

See Next Two Pages
for Plans and Details.

TO COMPARE today's modern style homes of good design with those of ten years ago on the basis of appearance or livability is difficult. Many recent developments in materials, equipment and space economy had not yet materialized; modern house styling was then in a very crude stage. But advances along these lines now make it possible for home builders to create a new conception of comfort and convenience even in the moderately priced home.

The house shown on this page with plans and details on the following two pages is typical of this better type of modern home. It was designed by Architect Elmer William Marx of Chicago and features pleasing modern style; staggered floor levels for less stair-climbing between the important rooms; efficient U-type kitchen plan with breakfast space; flat roofs for minimum of waste cubage and decks for outdoor living; automatic gas-fired winter air conditioning, combined with effective fuel-saving insulation.

Commenting on today's houses, Mr. Marx states, "Numerous technical improvements in equipment and materials combined with better design have given the architect new tools with which to plan for greater comfort and value."

Students of good home planning will find many unusual ideas in the plans and specifications of this carefully designed house.

ENTRANCE DETAIL at right shows a refined modern treatment. Hardware is in harmony with style. Drawings on next page show the flush entrance light and house number in canopy.



MODERN HOME IN 1938 STYLE
Designed by Elmer William Marx, Chicago
Architect and Built in Edgebrook, Chicago
Exteriors Shown on Preceding Page

"HIGH VALUE" 1938 SPECIFICATIONS

MASONRY

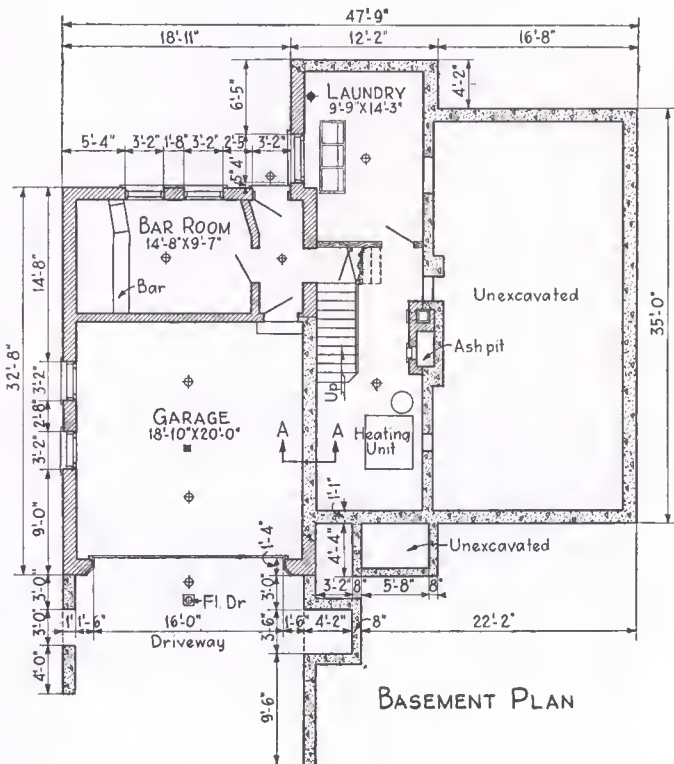
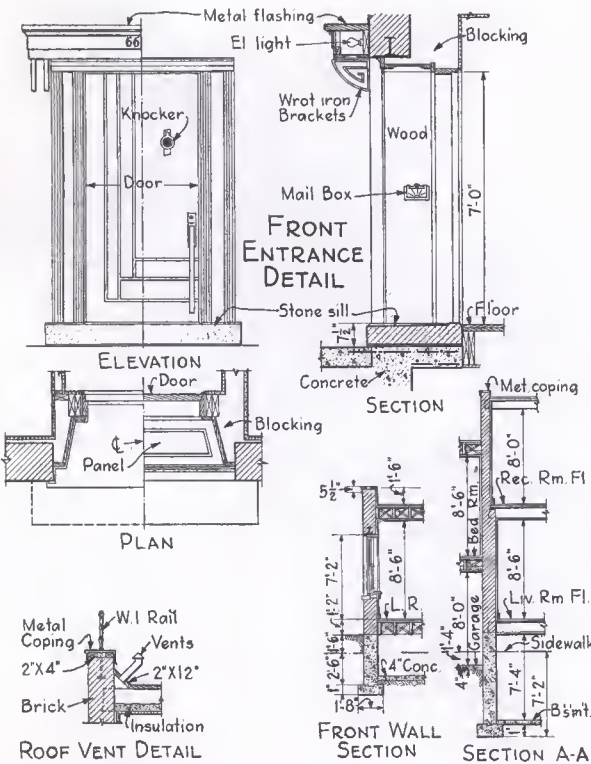
Remove black soil entire width of lot from public sidewalk to a distance of one hundred feet back from sidewalk.
Excavate to depths as shown on drawings. Backfill and rough-grade lot, placing black dirt on top. Haul away surplus ground.
Place all concrete footings, foundation walls, areas, floors and concrete slabs. Concrete footings to be carried down to solid bearing. Place chicken-wire in the concrete auto drive. Place the crushed stone auto drive from street to sidewalk. Plaster both sides of foundation wall. Slabs 1:2:4 mix; plastering 1:2 mix; other concrete 1:3:5 mix. Floors, drives and walks on 3" cinders.
Walls of superstructure are of solid masonry, exposed walls to be of new common brick. The back-up brick and all interior walls are to be of "used" common. Brick to be bonded-in in accordance to the city ordinance. Mortar to be cement-lime using torpedo sand with 3/8" struck joints. Leave dry joints on inside to nail furring strips.
Back hearth and firebox walls of the fireplace are to be of

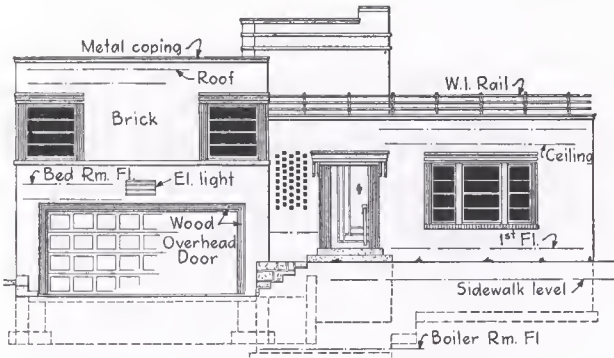
RIGHT: Kitchen is laid out in efficient U-type plan with good light, work space and storage; breakfast space is provided. Below and on opposite page are details, plans and elevations of this carefully planned modern home. Interesting roof vent detail (below) shows how dead air space over ceilings is ventilated. Recreation room with adjoining roof terraces is an unusual and pleasant feature.

fire brick laid in fire clay. Vitrolite facing by others. Place stone front hearth. Furnish and place the fireclay flue linings set in fire clay mortar.
Furnish and set all structural steel, lintels, cleanout doors, plate anchors, ash dump, Colonial damper, wrought iron interior stair railing, exterior wrought iron, reinforcing bars, etc.
Furnish and set all stone. Stone to be Indiana Limestone.
Clean down brick work upon completion.
Furnish and place one No. 15 Majestic Underground Garbage Receiver complete with 15 gallon corrugated G.I. can.

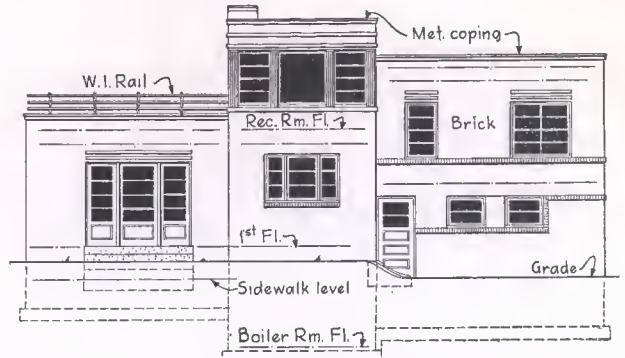
CARPENTRY

Structural lumber to be No. 1 Longleaf Yellow Pine. Studs to be 12" o.c. where joists are 12" o.c., otherwise 16" o.c.
(Continued to page 34)

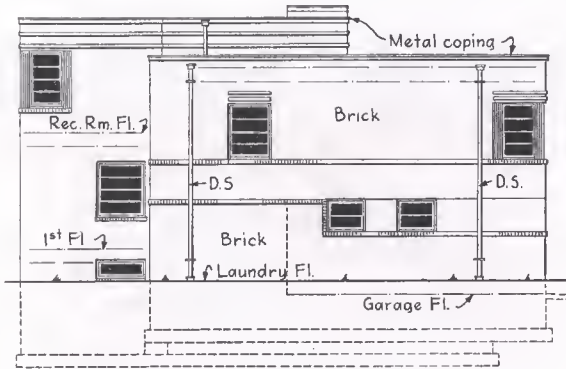




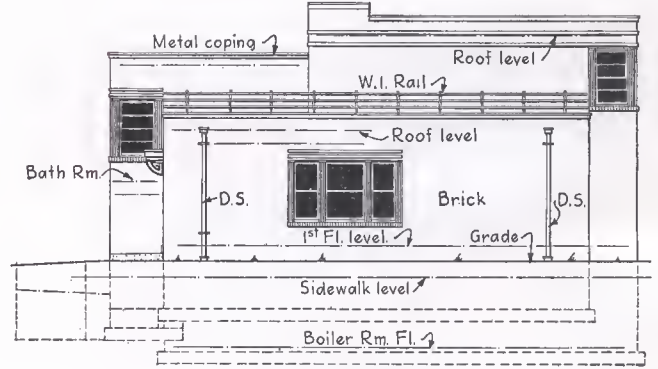
EAST ELEVATION



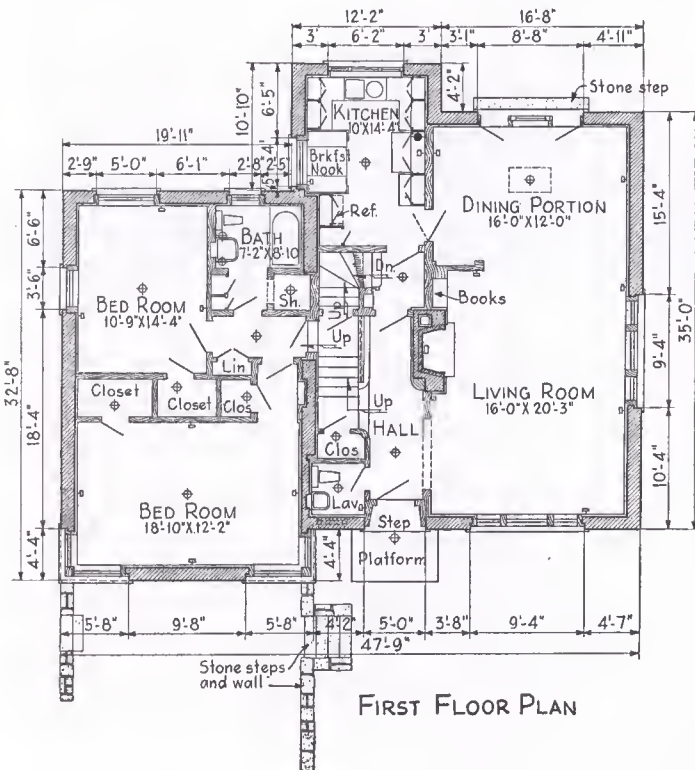
WEST ELEVATION



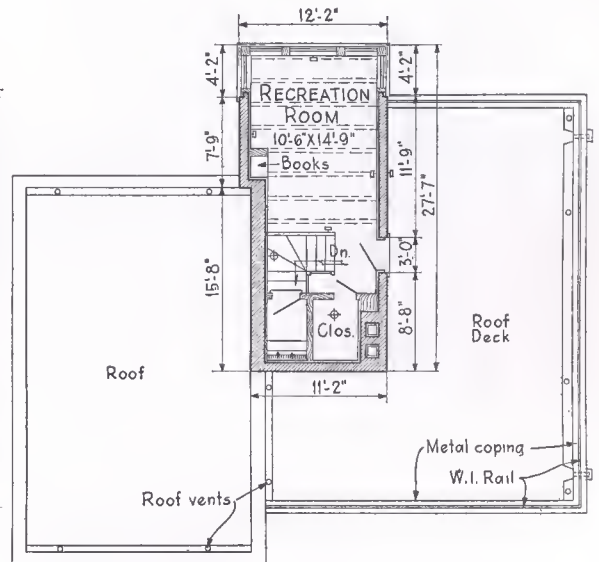
SOUTH ELEVATION



NORTH ELEVATION



FIRST FLOOR PLAN



RECREATION ROOM AND ROOF PLAN

Specifications for Modern Home

(Continued from page 32)

Place 1" x 3" cross bridging in each span. Two rows in spans over 13'.

All exterior masonry walls are to be furred. Provided 4" x 6" wood bucks over openings in masonry walls. Provided 1" x 4" furring strips around all window openings for curtain rod nailing blocks.

Roof boards to be 1" x 6", double nailed.

All window frames and sash to be stock, 1 $\frac{3}{4}$ " sash. Lugs on top sash only. Mill to furnish and place the Pullman balances for Bedroom No. 1 and Recreation room sash.

Main stairs to have $\frac{7}{8}$ " birch raisers, 1 $\frac{1}{8}$ " oak treads, and 1 $\frac{1}{4}$ " birch stringers, with iron stair railing by others.

Basement stairs to be of plank treads and stringers, 1" pine risers, and 2 x 4 handrail.

Door frames for brick to be 1 $\frac{1}{4}$ ". All exterior woodwork of window trim and door frames to be of white pine. Entrance door to be 2 $\frac{1}{4}$ ". All other exterior doors to be 1 $\frac{3}{4}$ ". Interior doors, except as noted, to be single panel Miracle type for enameling. Doors 2'-8" and wider to be 1 $\frac{3}{4}$ ", doors 2'-6" and less to be 1 $\frac{3}{8}$ ". Basement doors to be five cross panel pine. Garage door to be 1 $\frac{3}{4}$ " pine with raised moulding and raised panel.

Rough floors to be 1" x 6", double nailed; lath strip for first floor. Lay one thickness of 1 $\frac{1}{2}$ " building felt over rough floors.

Kitchen, rear hall, and powder room to have $\frac{7}{8}$ " x 2 $\frac{1}{4}$ " T & G pine floor for linoleum. All other floors to be $\frac{7}{8}$ " x 2 $\frac{1}{2}$ " T & G clear red oak except wood block floors in bedrooms over garage to be laid in mastic over slab.

Fur out for coves and arches. Frame for warm air heat ducts.

Place the 1" Celotex on the roof boards over the recreation room.

Set grounds for plastering, but none required for doors and windows.

Interior trim to be stock and of sap gum, excepting window sills which are to be of birch. Trim omitted on doors and windows (excepting windows in bath and recreation rooms).

Carpenter to place all trim hardware.

Furnish and place a wood slat deck on the portion indicated on the roof over the living room.

Provide 1 $\frac{3}{8}$ " coat rods and three shelves in each closet.

Partitions in basement to be of 2" x 4" cross framing covered with $\frac{1}{4}$ " 3-ply fir plywood on a 1" x 4" base.

Furnish and place one Hess medicine cabinet with 18" x 28" mirror, and one with 16" x 22" mirror for powder room.

PLUMBING

BATHROOM: Briggs "Beauty ware" bath tub, 5'-0" white and black colored acid-resisting enameled for recess, with rim seat and front panel. To be hung from a Lucke Leakproof Tub Hanger.

Kohler lavatory, 20" x 24" white acid-resisting enameled apron with drain and chromium plated overflow, on two chromium plated legs.

"T/N" closet, white vitreous china one-piece, quiet-action, non-overflow, angular design; white sheet covered extended back seat and cover.

Furnish and place one 36" x 36" Fiat terrazzo shower receptor for tile walls complete with floor drain and chromium plated strainer. Speakman head. Lehman plate glass and chromium plate shower door.

POWDER ROOM: Weil-McLain lavatory, 17" x 19" Tuscan colored acid-resisting enameled shelf-space apron, on concealed hangers. "T/N" water closet.

KITCHEN: Standard Sanitary sink.

BASEMENT: Weil-McLain "Shelfon" 3-part laundry tray, 24" x 72" Granite.

Everhot "Senior" Automatic Gas Water Heater, 30 gallon capacity.

Goder incinerator.

HEATING

Garage and laundry are to be heated.

Furnish and place one A.G.A. approved Bryant gas-fired winter conditioning unit complete with aluminum draft-diverter and aluminum flue connection of the same diameter as the connection on the unit and provide summer switch.

Registers to be Hart & Cooley directional flow grilles. All supplies and returns, excepting those in the living room, dining room, and first floor hall to be equipped with dampers. No floor registers permitted. Supply ducts to be from 6'-6" to 7'-0" above the floor. No joist or stud linings permitted.

System to be of the trunk line type with rectangular ducts. Ducts in basement to be equipped with quadrant volume damper to regulate independently the volume of air delivered from each supply outlet. Provide two supplies and returns from living room and at least one supply and one return from each other room and hall. No returns from kitchen, bath, and lavatory. Risers to be of No. 26 gauge galvanized prim sheets. Horizontal ducts up to 20" to be No. 26 gauge while those over 20" are to be No. 24 gauge.

SHEET METAL

16 oz. copper rectangular downspouts, gutters, and flashing. Furnish and place the conductor heads where shown, flashing both sides of the masonry walls. Provide the 16 oz. copper roof vents where indicated. Range vent not required. Provide galvanized iron clothes chute with openings as shown. Provide metal flashing at step onto roof from recreation room.

ROOFING

Furnish and place three-ply built-up asphalt roof over all flat roof surfaces. Flash up parapet wall and secure with lath strip. Same to be 1—30 lb. and 2—15 lb. sheets, and fully mopped with hot asphalt.

All roofs to be guaranteed for five years.

WIRING

Wires to be duplex single braided Habirshaw or Ravel Cord, placed in thin-wall galvanized steel tubing conduit.

Provide Square D service switch.

Each light and switch to be equipped with steel outlet box.

H & H toggle switches and brass plates. Chromium plates in kitchen, bath and lavatory.

Furnish front and rear door buttons, terminating at Duo Chime. Provide electric door opener for rear basement door at laundry controlled by push button in kitchen.

Furnish and place on Moder No. 113 ten inch "Pacific Breeze" Pryne kitchen ventilating fan complete with louvers, and No. 124 extension.

Radio outlet of power, aerial under roof, and ground.

Furnish and place 'phone outlets where indicated.

LATHING AND PLASTERING

Basement ceiling to be plastered. Metal lath over furnace to be 9' x 15'. Place 3 4-lb. metal lath over furnace, garage ceiling, cove, arches, bathroom wainscot, and living and dining room ceilings.

All outside walls to receive $\frac{1}{2}$ " Insulite Lok-joint lath.

All exposed first and second floor ceilings will be insulated with 4" of Rockwool.

Rock lath for all other walls and ceilings.

Carpenter will fur out for all coves and arches.

Three-coat plastering work.

Knapp No. 31 corner beads for all doors and windows excepting windows in recreation room and bath, which windows will have wood trim.

Metal corner beads for all exposed corners. Metal lath shoes in corners of all rooms.

GLAZING

Place full length plate glass mirrors on doors where indicated to be set in felt.

Furnish and place 7/16" black Vitrolite on the fireplace face.

Place $\frac{1}{4}$ " polished plate glass for the large center light in the recreation room window. Place $\frac{1}{4}$ " beveled plate glass mirror over the mantel.

Basement glass to be "B." Balance of glass to be double strength "A" labeled, Libbey-Owens.

TILE

Provide fill for floors consisting of one part non-staining cement to three parts of white sand.

Bathroom floor to be of 1 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " colored ceramic tile.

Wainscot in the bath proper to be 5'-0" high and of 4" x 4" colored matt glazed tile. Tile to extend around the medicine cabinet to a height of 6'-8" and a width of 36". Base is not to be coved. Wainscot to have a $\frac{1}{2}$ " figured border strip. Cap piece to be 4" x 4" bull nose.

The tile in the shower stall is to be 6'-0" high 4" x 4" bull nose cap.

All oak floors are to be filled with paste filler and to receive two coats of varnish. No floor finish required in kitchen, rear entry, powder room, and bath.

No wall or ceiling decoration in the basement or garage.

The walls of the living room, dining room, stair hall, and bedroom passage are to be primed with lead and oil, and then to receive two coats of lead and oil (flat). Walls then to be starched.

The walls and ceilings of the kitchen, rear entry, powder room, and the walls and ceilings above the wainscot of the bath are to receive one coat of lead and oil, size, one coat of undercoater, and finished with one coat of enamel, brush stippled.

Bedroom walls to be glue sized and then to receive wallpaper. Knotty pine paneling on walls of recreation room.

Ceiling in recreation room is of pine, and is to be stained, shellacked and waxed.

All other plastered wall and ceiling surfaces not particularly mentioned to receive hard oil and calcimine.

Register faces of hot air ducts and switch and base plug plates to be painted to blend with the surfaces upon which they occur.

KITCHEN CABINETS: Hoosier.

SCREENS: Copper.

INSULATION: 4" Rockwool for all exposed ceilings excepting over the recreation room and on garage, bar, and passage ceiling. $\frac{3}{4}$ " Spray-O-Flake for all outside plastered walls and calcine paint finish.



CONCRETE HOME AT CHAPPAQUA, N.Y.; PLANS ON PAGE 39

CHAPTER II

BIG-VALUE SMALL HOUSES

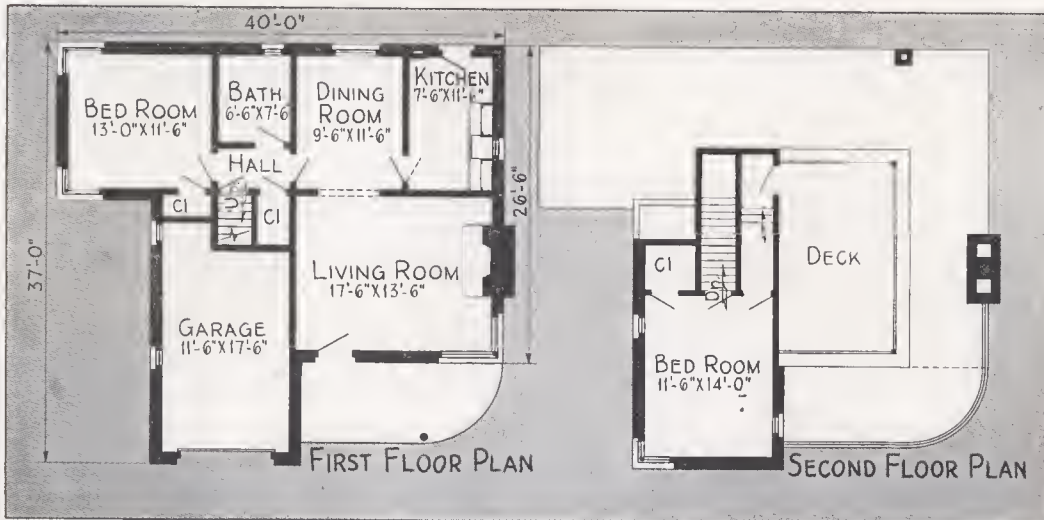


PLANS ON PAGE OPPOSITE

TYPICAL of the big value being put into today's home through better planning, more efficient construction and greatly lowered financing costs—this "modernistic manor" from Oklahoma is THE ANSWER for many forward-looking home builders.

"MODERNISTIC MANOR" FROM OKLAHOMA

J. D. BONENBERGER of Oklahoma City built and sold this modernistic house last year, and it has attracted wide attention. It is a compact inexpensive type of structure with garage at front and an unusual second floor deck with a flat roof. The house has an all-electric kitchen, tile bathroom, steel casement windows with Venetian blinds, laundry space in garage. The Bonenberger Company has been operating in Oklahoma City for more than 18 years, featuring the slogan, "Builders of Better Built Homes."



FLOOR plan is compact with very little waste space. There is a bedroom and sun deck upstairs and bedroom and bath on first floor.





Hospitality Welcomes Here

Big living room of home pictured in color on page 35, (plans on page 39) exemplifies the value built into today's good small homes

House at Chappaqua, N. Y.
Emil J. Szendy, architect
and O. Berg & Co., builder.
Floor is concrete covered
with random width red oak.

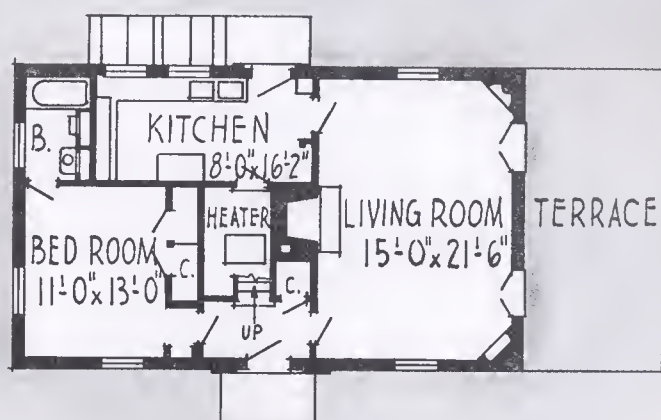
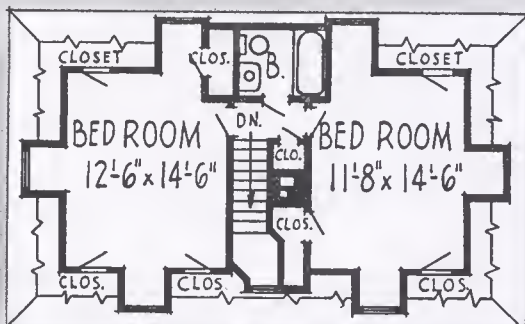


OLD WORLD STYLE

**Concrete Masonry house of
delightful French style at Chappaqua, N. Y.
Emil J. Szendy of N. Y. City, Architect
O. Berg & Co. of Howard Beach, L. I., Builder**

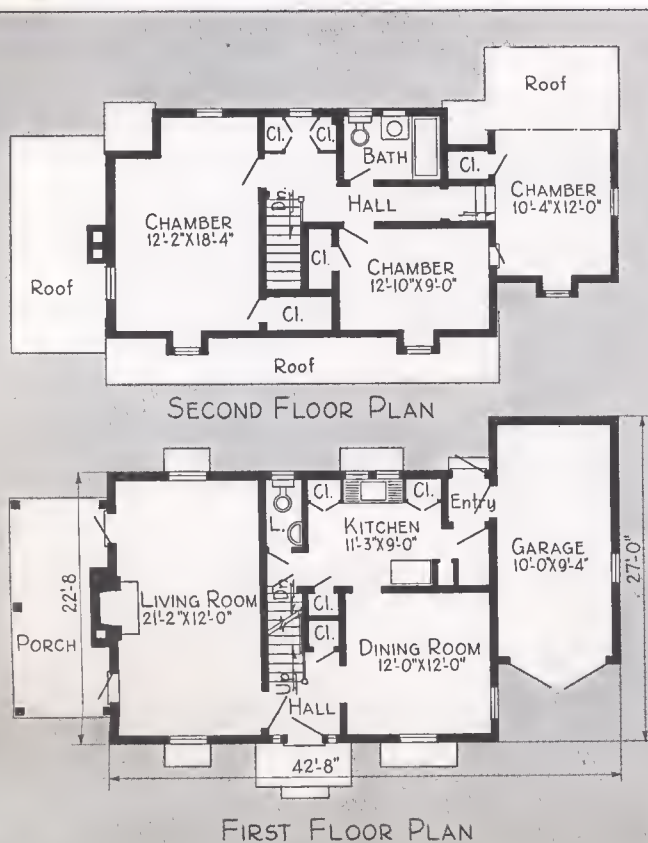


For presentation of this home
in full colors see page 35.





6-ROOM COLONIALS WITH ARCHITECTURAL CHARM



THE three homes on these pages are part of the "Cape Cod" development of Realty Associates at Hewlett Point, L.I. All the houses in the section have an attractive Colonial quality inside and out. Several variations of the same plan are shown. Popular features include the attached heated garage and the open porch with French door leading to it from the living room.

DESIGNED by Benj. Driesler, Jr., of 162 Remsen Street, Brooklyn, N.Y., these houses feature poured concrete foundations, select oak floors, 3x8 floor joists, slate roofs, Armstrong linoleum, Colonial staircase, shutters, heavy Colonial doors throughout, copper gutters, leaders and flashings, copper storage tanks, ample closet space, lavatory and shower on first floor, scientific kitchen cabinets.



THE open porch with French doors leading from living room is an attractive feature of this Dutch Colonial located at Hewlett Point, L.I.

41

CLEAN cut Colonial lines make "The Falmouth" designed by Benj. Driesler and illustrated below a popular house.





APARTMENT COTTAGE

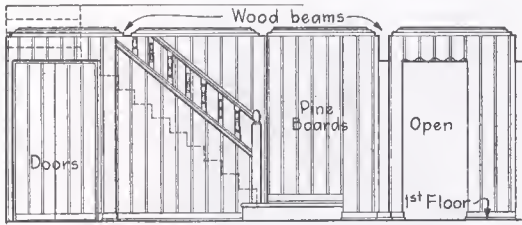
**Built in Berwyn, Illinois, by
Home Builders Co., Chicago**

FOR a young couple or two elderly people who desire the compactness and convenience of an apartment and at the same time live in their own house, this cozy three-room cottage is an ideal solution. A good sized living room, with dinette alcove overlooking an enclosed paved court, occupies most of the first floor; the closet for a folding bed allows guest accommodation. One large bedroom, bath and plenty of storage space are on the second floor. There is no basement, a heater room being provided.

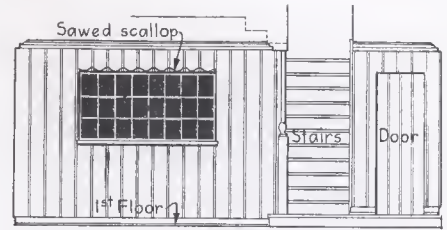
THE VIEW at the immediate right shows the kitchen as seen looking through the dinette from the living room; the other view is from the kitchen into the dinette. A feature is the attractive paneling shown in the drawings on the opposite page.

An interesting construction detail is the first floor treatment—a concrete slab on cinders over which the joists were placed so as to give about a two-inch clearance forms an air chamber under the first floor. This air space is used as a heating return duct and keeps the floor warm and dry. Ludowici-Celadon glazed roof tile, Fenestra steel sash and Bondex exterior paint among materials used.

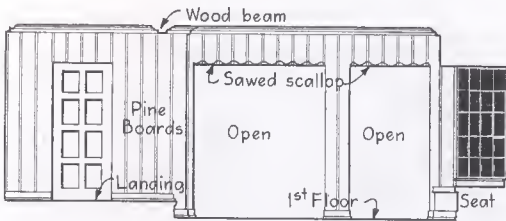




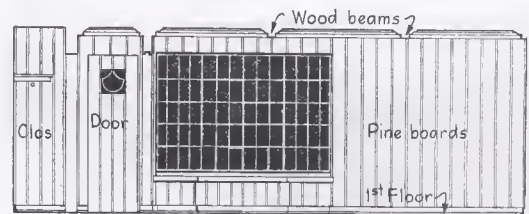
EAST WALL OF LIVING ROOM



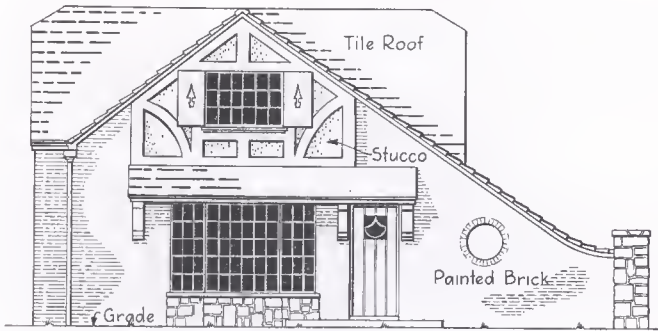
NORTH WALL OF LIVING ROOM



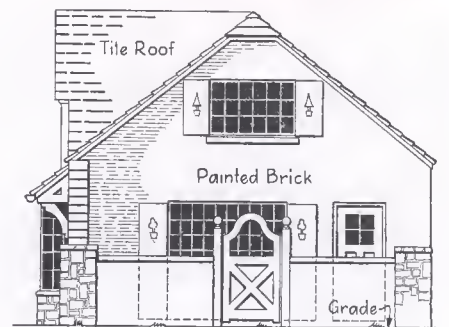
SOUTH WALL OF LIVING ROOM



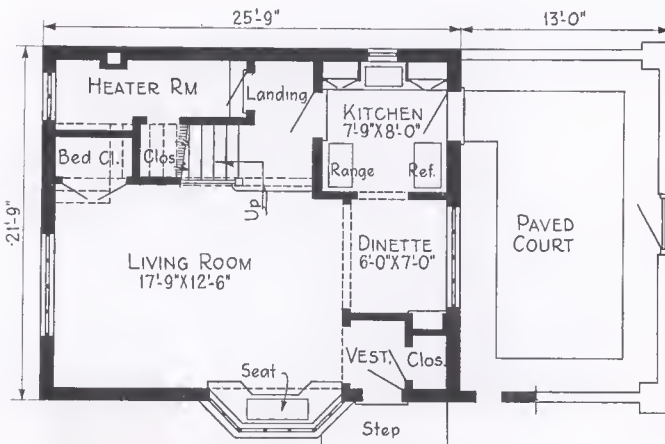
WEST WALL OF LIVING ROOM



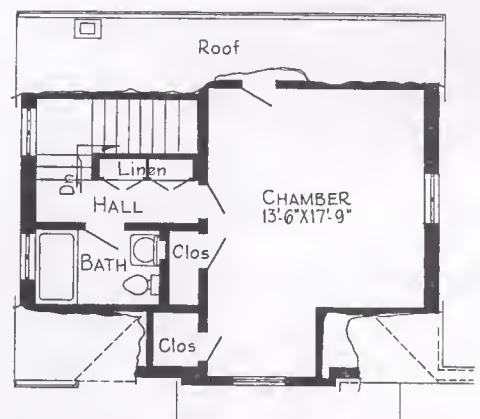
FRONT ELEVATION



SIDE ELEVATION



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THE DINETTE is a popular feature of this little cottage in the new Long Island project of Franksons Constr. Co. There is a full basement and room for 2 additional bedrooms in the attic.

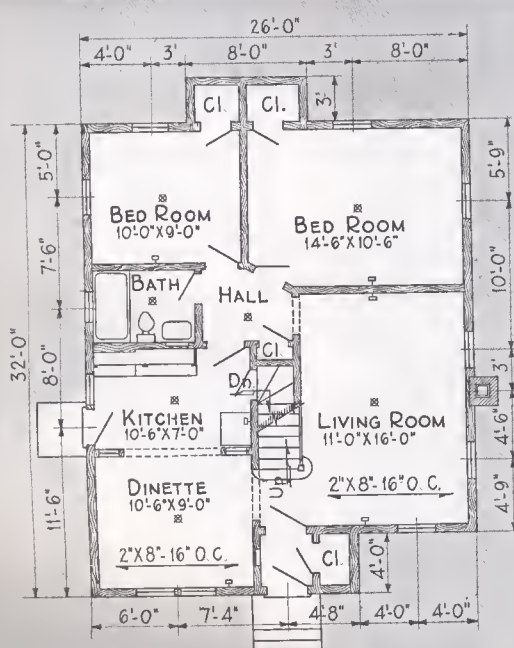
LITTLE BUT LIVABLE

Four and Five-Room Cottages, as Small as 24'-4" x 26'-10", Built by Franksons Construction Co. to Meet Low Cost House Demand

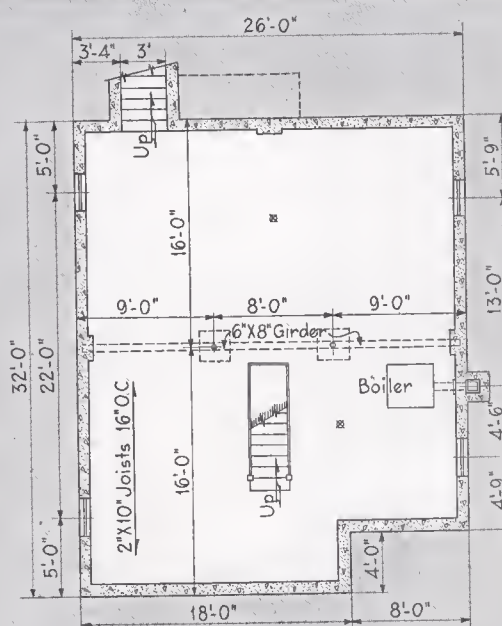
LEONARD FRANK and his sons, who constitute the Franksons Construction Company, developers of Parkside Homes at St. Albans, Long Island, N.Y., are doing their bit to solve the low-cost home problem. They are building and selling four-room-and-bath houses with a floor area of only 24'-4" x 26'-10" and a cubage of 13,000 cu. ft.—yet these little homes are very livable and very attractive.

For buyers with a little more money they have a slightly larger model (illustrated on this page)—26' x 32'—which has two bedrooms downstairs and an attic big enough for two additional bedrooms. This little house has an attractive dinette similar to the one provided in many luxurious city apartments.

Architects Danancher and Fanandre, of Jamaica, L. I., have done a clever job of working in necessary items in the small cubage allowed. One of these is a good front-



FIRST FLOOR PLAN



BASEMENT FLOOR PLAN

LIVABLE, comfortable rooms are achieved in this floor plan by making every inch of the 26 x 32 ft. floor area work. (Plan is shown reversed to put living room on right side.) There is a good hall closet, attractive dinette, fair-sized bedrooms, and stairways to both cellar and attic.



ONLY 13,000 cu. ft. are enclosed in this tiny 4-room cottage with cement-asbestos shingle exterior. Yet it takes care of the essential living requirements of a small family. There is a full basement, ample closets, clever arrangement of rooms.



hall clothes closet—an item which many low-cost home designers leave out. In the larger type house the living room is 11' x 16', and one of the bedrooms is 14' 6" x 10' 6". There is a compact center hall arrangement with linen closet. The bathroom plumbing backs on the kitchen plumbing—an economical feature.

In the smallest model, of which two exteriors are illustrated, a clever kitchen-basement entrance arrangement has been worked out. The back door is dropped to ground level and enters upon a platform three steps below the kitchen level. This makes it possible to work in the basement stairs with a minimum of floor space. The ceiling height is 8' 4" and the roof pitch is very low, the ridge height being only 7½'. The cubic contents of this model is approximately 13,000 cu. ft.

Although the Franks have gone to great length to pro-

duce a small compact model, they have not stinted on equipment. The houses are insulated and equipped with an oil-burning winter conditioners. Specifications include:

FOUNDATIONS—10" monolithic concrete, with full basements having 4" concrete floors.

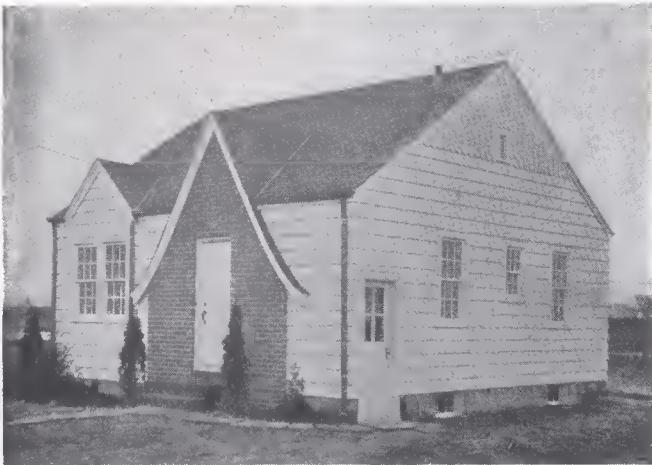
INSULATION—Reynolds Metallation on Ecod fabric plaster base. **HEATING**—Reynolds air conditioner with oil burner, fan, filter, automatic controls and prefabricated duct system.

COPPER GUTTERS, leaders, valleys and flashing; brass plumbing. **WOOD SIDING** or Johns-Manville cedar-grained asbestos shingles. **THICK BUTT ASPHALT SHINGLE ROOFS.**

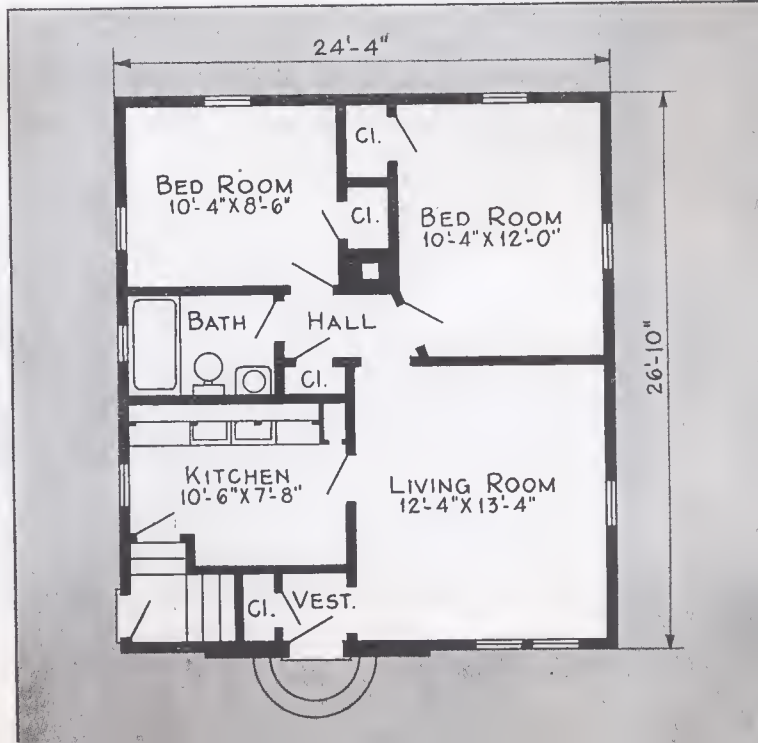
KITCHEN—Linoleum floor, table-top range, built-in kitchen cabinets with linoleum top work area.

BATHROOM—Travertine tile floors, built-in tub and shower, Venetian medicine cabinet, Standard plumbing fixtures.

Rooms have adequate base plugs, plenty of closets, firestops in every floor. The lot sizes range from 40 x 100 to 60 x 100 ft.



THE ALTERNATE small cottage design above is done in wide siding, with a brick entrance detail. An outstanding feature of the floor plan at right (shown reversed) is the kitchen entrance with grade entrance opening on basement stair.





Exterior of the tiny Devon cottage is done in white asbestos siding with grey asbestos shingle roof. The colonial entrance detail, shutters, window box and awnings give it a homey air frequently missing in so small a house.

MORE FOR THE MONEY— DEVON COTTAGE OF 1938

SPONSORED by the Middle Atlantic Lumbermen's Assn., this interesting little model demonstration cottage shows the progress of the 1938 small home. It was built by contractor Lowell Gable from plans by architect William F. B. Koelle for the Devon, Pa., Horse Show and County Fair. It is an extraordinary compact little house, well-laid out and well-equipped. The cubic contents are 6,900 cubic feet and the overall dimensions only 25x23, yet it has all the necessary space and equipment for comfortable living by a small family. Forced, filtered warm air is provided by the heating plant in alcove off kitchen. Nothing like this was possible in 1926.



William Koelle
Architect

Lowell Gable
Builder

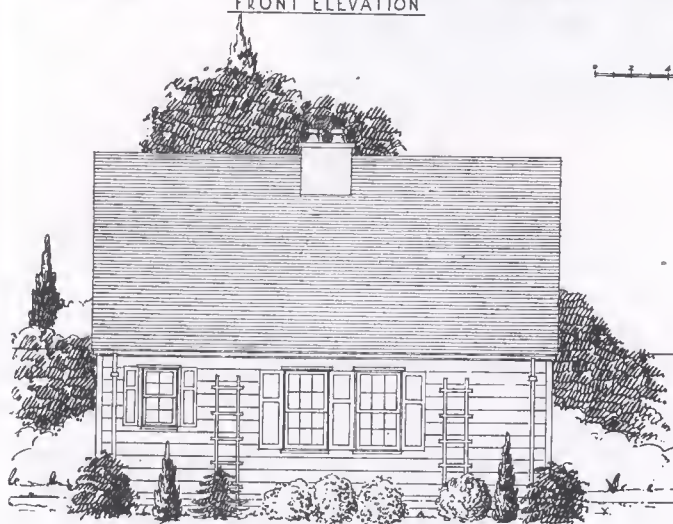
The 13 x 20 foot living room has many attractive features including a built-in day bed, attractive colonial fireplace, built-in bookcase and warm quiet interior finish of decorative insulating board in 2 colors. It is an unusually large and good-looking room for so small a cottage.



FRONT ELEVATION



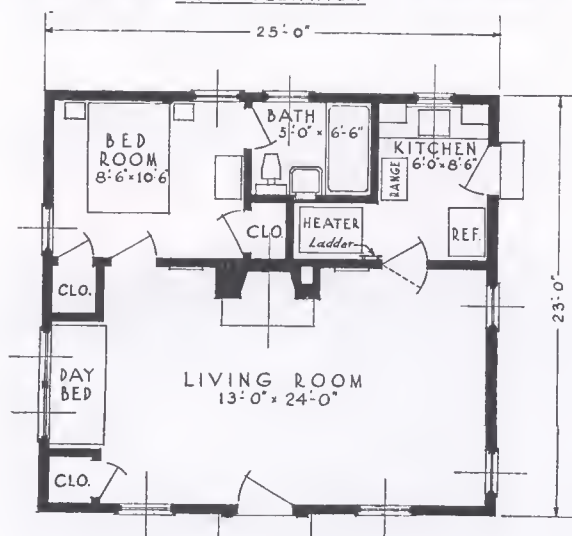
RIGHT SIDE ELEVATION



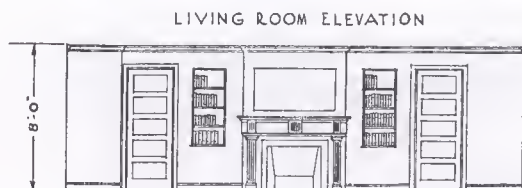
REAR ELEVATION



LEFT SIDE ELEVATION



FLOOR PLAN



LIVING ROOM ELEVATION

BUILT-IN MAIL BOX by American Device Mfg. Co., Red Bud, Illinois.

DUOCHIME door bell by Edwards & Company.

KITCHEN AND BATHROOM WALLS—Mono-Wall durable waterproof fibre finish by Standard Wall Covering Co., Inc., Philadelphia.

PLUMBING FIXTURES—Kohler.

HEATING—Arco Vecto heater with air fan filter and humidifier, burning either coal or oil, American Radiator Co. Warm air is forced under pressure from the upper part of the utility room through ducts to rooms.

DOMESTIC HOT WATER—Ruud Conversion heater; storage tank in attic, thermostatic control.

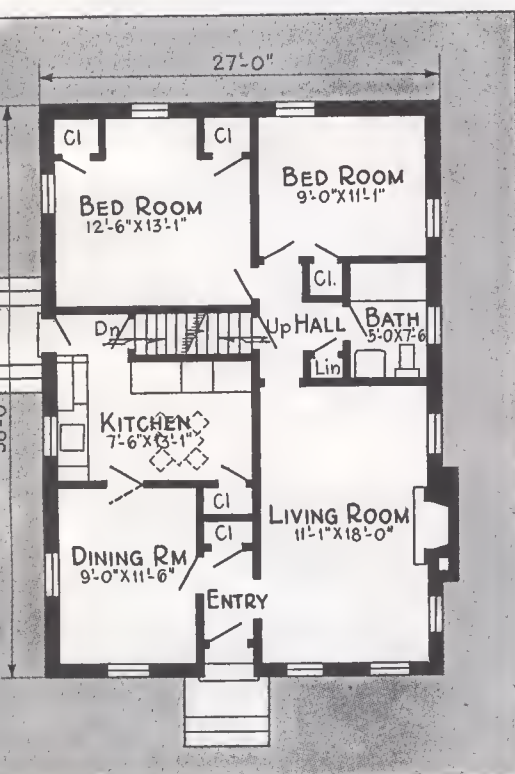
BLOCK WALK of Pecky Cypress by the Southern Cypress Mfg. Assn.

SPECIFICATIONS SHOW 1938 PROGRESS

EXTERIOR—Keasbey & Mattison white asbestos siding, and grey asbestos shingles.

INTERIOR—Walls and ceilings of Celotex in 2 shades.

MILLWORK, including colonial entrance, fireplace mantel, doors, windows and trim, by Curtis Companies Inc.



ABOVE: Cape Cod style exterior with five-room floor plan has proved to be one of the most popular designs. The plan shows good space economy with ample facilities, plenty of closet space, good light and ventilation. The full basement, as in all these houses, is arranged so that a recreation room may be completed; the second floor can later be finished for one or two bedrooms and bath.

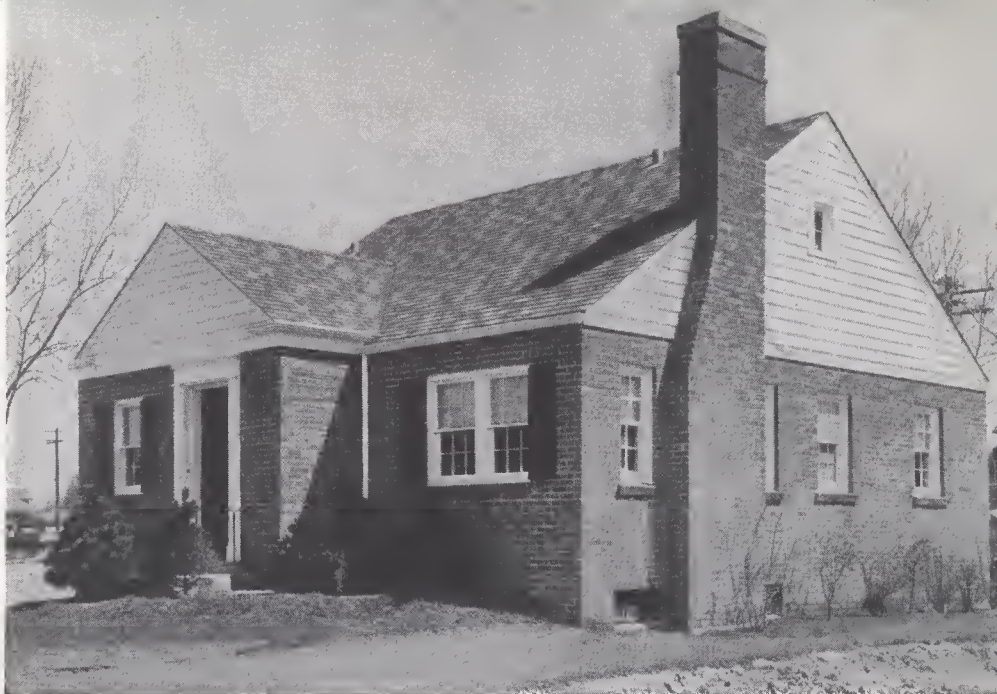
RIGHT: The French farmhouse treatment is indicated with an alternate exterior variation on the opposite page, having the plan reversed, unpainted brick and light shutters. A feature of this house is the pine paneled dinette with bay having access to rear terrace.

ATTRACTIVE, PERIOD STYLED SMALL BROADVIEW, ILLINOIS, DEVELOPMENT

JOHN CUMMINGS LINDOP Real Estate, Inc., nationally known firm in Oak Park, Ill., started a home building program in Broadview this year with the purpose of offering moderately priced, carefully planned and designed small homes which would fill a pressing need in that part of metropolitan Chicago where medium cost house construction has been stagnant for years. Architect Alfred F. Schimek prepared more than 30 different plans with exteriors in the various Colonial, French and English styles which give a pleasing variation in appearance but maintain a harmonious feeling throughout the project. By reversing plans and using alternate color schemes, as indicated on these pages, even further variety is assured. In plan, materials and construction, these little houses are gems of compactness and efficiency.



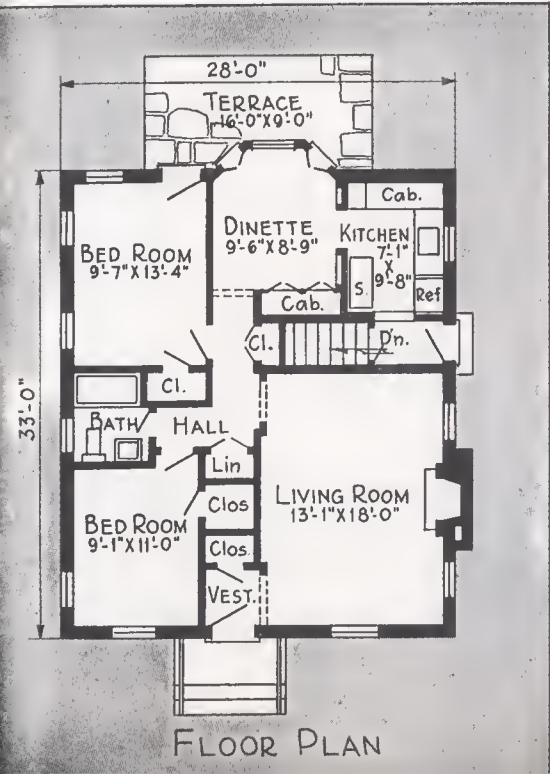
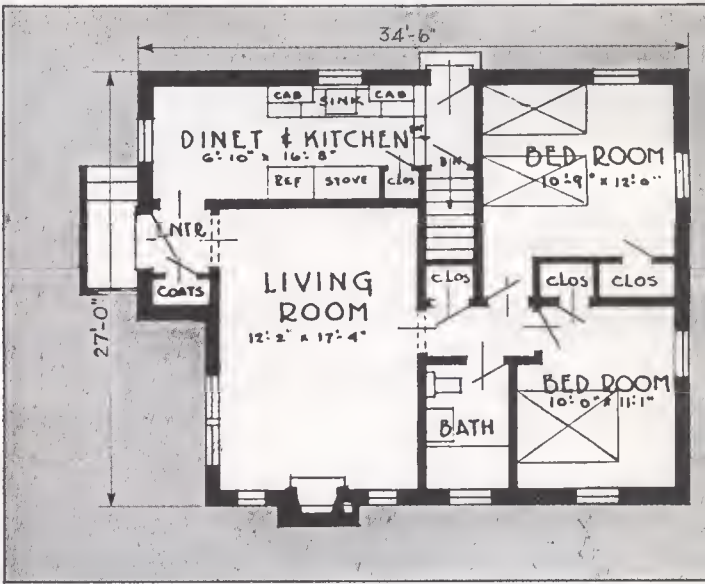
THE HOUSE at the right is the smallest in the Broadview development. A dinette is used instead of dining room. The living room and bedrooms, however, offer almost as much well-arranged space as in the five-room houses.



HOMES IN JOHN C. LINDOP'S
FEATURE MODERN PLANNING

Houses Located in Suburban Chicago
and Designed by Alfred F. Schimek,
Architect, of La Grange, Illinois

FURTHER DETAILS ABOUT THESE
HOMES ON THE FOLLOWING PAGE



FLOOR PLAN





TO CONTINUE the important "Truth About Building Costs" and "More Value Today" selling theme, the 1938 Lindop home at the left and the typical bungalow of a decade ago built for a similar market are compared in the outlines below. The 1938 outline also applies to homes on preceding two pages; plans at bottom of page indicate present modern efficiency of house at left.

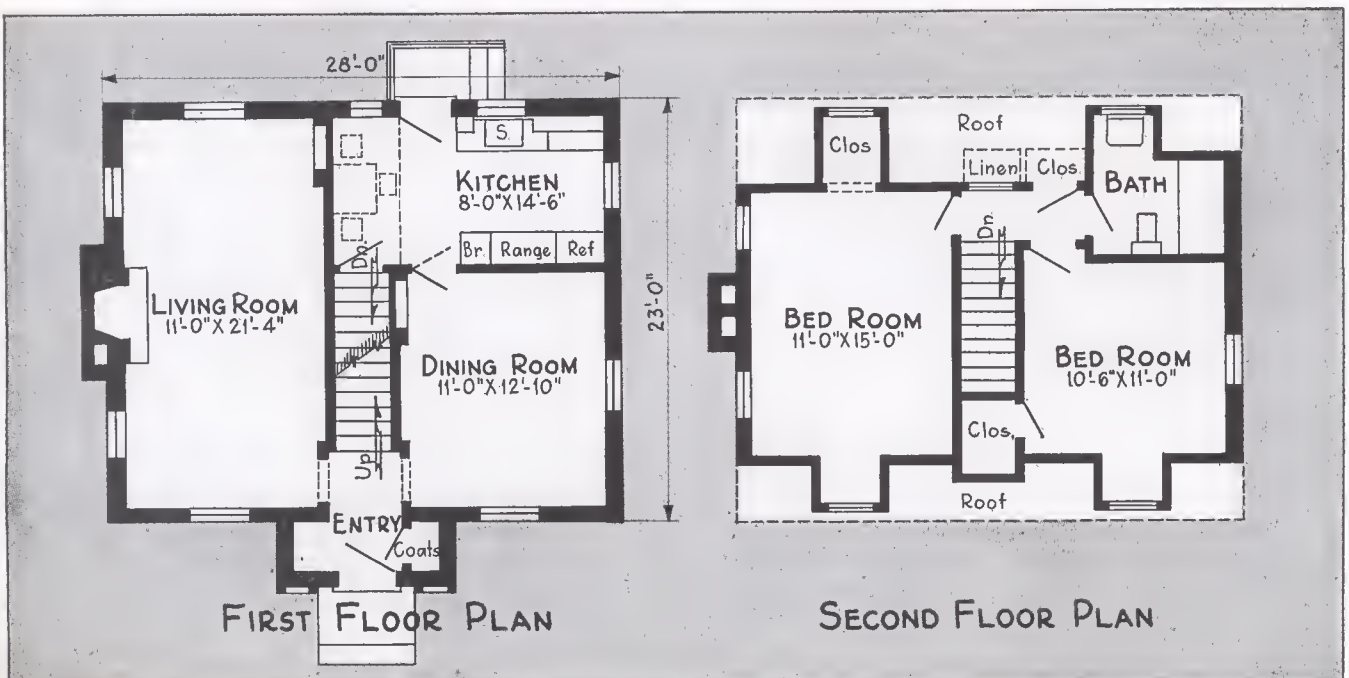
Lindop Houses Show Today's Better Values

1938 CONSTRUCTION OUTLINE

Concrete floor, 4" thick.
Masonry: face brick all around.
Steel basement frames and sash.
Floor joist 2 x 10 preshrunk. Inlaid linoleum in kitchen.
Asphalt shingle roof with 15 lb. felt.
Windows operated with Unique sash balances.
Hardware all solid brass; Schlage door locks.
Decorating: 3 coats, Pratt & Lambert; paper costing \$1.00 to \$2.00 per roll. Painting, exterior: 3 coats.
Heating: air conditioned. Natural fireplace.
Plumbing: water pipes—copper. Briggs Beautyware fixtures, colored; toilet in basement. Cabinets in kitchen.
Electric wiring: 40 openings.
Landscaping: lawn and shrubs.
Screens: bronze wire.
Insulation: 1/2" Celotex, side walls; 2" rock wool, ceilings.
Selling for less than 1927 typical 5-room bungalow.

1926-27 COMPARABLE FEATURES

Concrete floor, 3" thick.
Masonry: face brick front only.
Wood basement frames and sash.
Floor joist 2 x 8 No. 1 Y.P. No linoleum on kitchen floor.
Asphalt shingle roof; no felt.
Windows operated with sash cord and weights.
Hardware: steel with brass finish.
Decorating: 2 coats; paper costing 30c to 75c per roll.
Painting, exterior: 2 coats.
Heating: hot water. Artificial fireplace.
Plumbing: water pipes galvanized iron; fixtures white; no toilet in basement. No kitchen cases.
Electric wiring: 28 openings.
Landscaping: none.
Screens: black wire.
Insulation: none.
Cost about 16% more than today's improved 5-room home.



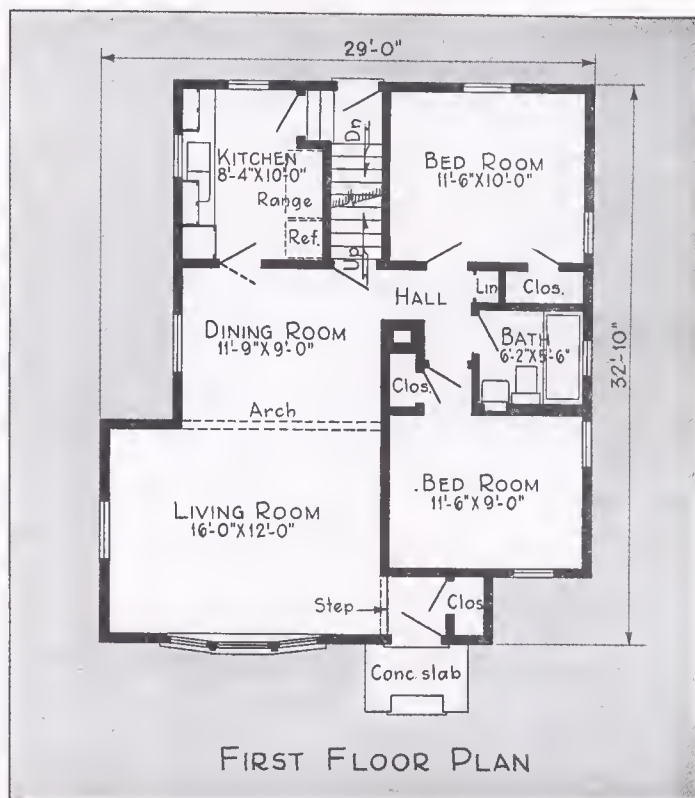


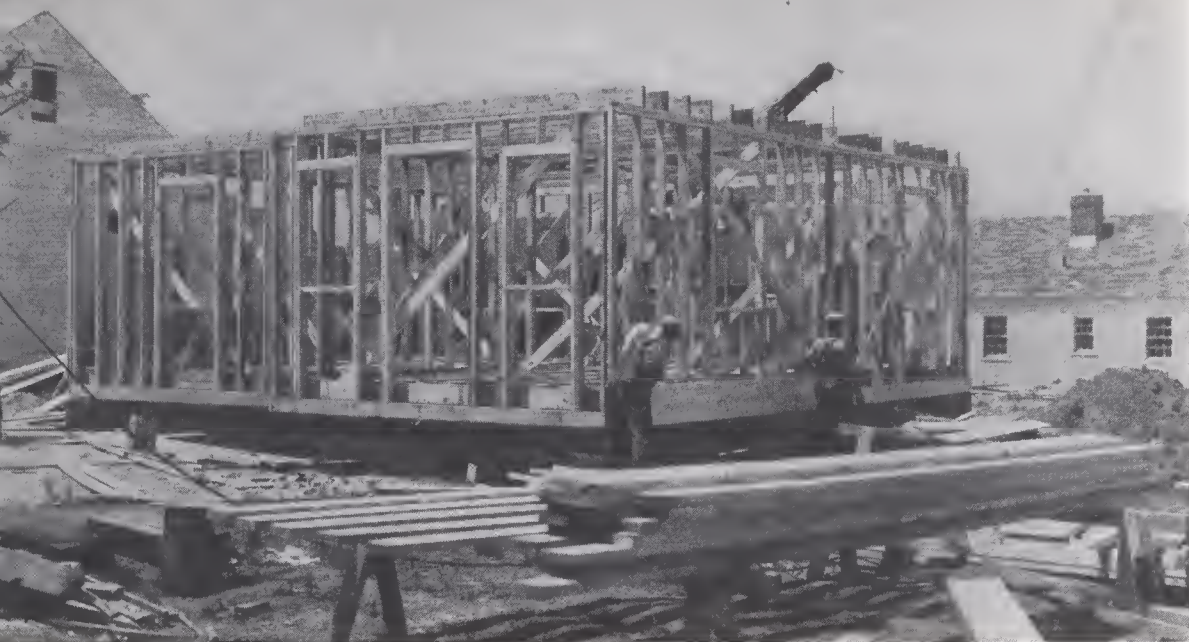
"MASTER BUILT" PLYWOOD HOUSE

Designed and Built by Harry J. Durbin, Detroit

CAREFUL PLANNING, pleasing appearance and good construction are found in this recently completed Detroit house in which plywood has been economically used for sheathing, interior wall finish and subflooring. The framing methods including the use of shop fabricated panels in this moderately priced house are described in the article on the opposite page. As shown above the exterior appearance is similar to that of any well designed small house of conventional construction. However, the window trim except on the bay is quite narrow; this is due to a special framing procedure where the studs serve as jambs and head.

THE FLOOR PLAN has been carefully worked out for economy of space with adequate facilities for modern living. An open type floor layout and sufficient windows assure good light and ventilation. Combination living and dining room 21 feet long increases the apparent size of the interior as the width of the house is only 29 feet. The kitchen has a built-in cabinet and sink unit. Two bedrooms and bath are placed to one side with a small connecting hall; on the second floor there is unfinished space for two additional bedrooms.





ON-THE-JOB construction picture shows the little Colonial house illustrated on opposite page. Construction features include 4x6 sills; 6x8-inch first floor girder; first and second floor joists 2x8 on 16-inch centers, doubled under bearing partitions; 2x6 rafters 20 inches on centers together with 1x6 collar beams.



VOLUME sales are helped by attractive signs such as this.

SUCCESSFUL

Builders of

SKEPTICAL builders have heard so much loose and often misleading talk about low cost houses that they rightly regard the subject with suspicion. Yet, common sense shows that there is a huge untouched market for homes where the price can be brought down within the means of low income groups of people.

American Builder believes that the demand for low cost houses is a challenge to its readers. The demand must be met or the double threat of prefabrication or government competition to subsidize housing will be furthered.

To show conclusively that low cost homes can be built and a fair profit earned, it is only necessary to consider the operations of Realty Associates, Inc., whose office is in Brooklyn, N. Y., and who have three active home developments on Long Island. The president of this company, Frank Fox, and his able vice-president and construction superintendent, Harry D. Burchell, have made low cost homes a reality. Their latest development, Hillside Heights, was started in midsummer last year and in six months had built and sold 160 houses, ranging in cost from \$2,500 to \$4,500. Another development featuring attractive Colonial homes is in progress at Hewlett Point Park, where houses are priced at slightly under \$5,000. In Stewart Manor South, another development, the price range is slightly above \$5,000. These prices include cost of

land and all improvements, landscaping and a complete house ready for occupancy.

Realty Associates have found that young couples constitute a large part of their prospective customers. In Hillside Heights, the lowest priced development, the age of the largest group of purchasers was between 25 and 30. Two-thirds of their sales were made to purchasers whose ages were between 25 and 40.

Another interesting fact about the purchasers of homes at Hillside Heights is that 41 per cent had incomes between \$1,500 and \$2,000. Ninety-one per cent had incomes under \$3,000.

The officials of Realty Associates have found, as have other builders elsewhere, that they must set out to produce a low cost house that falls within the price range the mass of buyers can afford. This means that the house cannot have all the luxuries and high priced specialties featured in the women's magazines. But it does not mean that a sound, comfortable, livable modern house cannot be built within the means of people of lower income.

The most spectacular of the Realty Associates projects is the low cost development at Hillside Heights near Mineola, L.I. The inspiration for this project was received from the Federal Housing Administration's program for low cost houses, for which plans and specifications were drawn up and widely circulated to builders throughout the country.

THIS is one of the popular low-cost Hillside Heights homes designed by Architect Benj. Driesler, Jr., which can be carried by the purchaser for about \$30 per month. There is space for two future extra bedrooms in the attic.



Small Homes

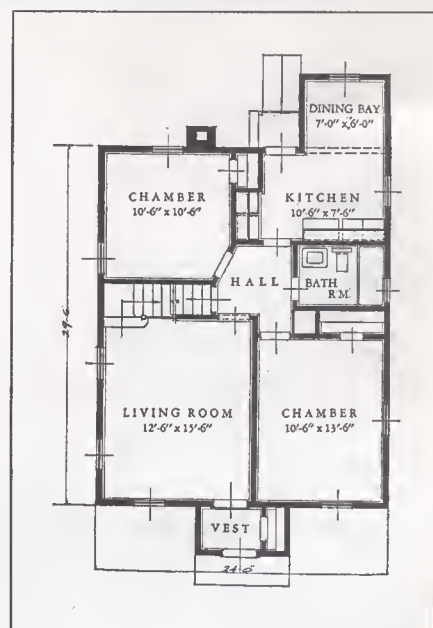
Thousands of builders have received the data on these low cost houses as published in *American Builder* and as circulated in folder by FHA. Only a few have acted on them. One of the first was Realty Associates. They took immediate steps to start such a project.

Helpful co-operation was received from the Federal Housing Administration in planning the development. Architect Benjamin Driesler, who has done many hundreds of designs for Realty Associates, took the FHA low cost house plans and adapted them to local conditions. They were made practical and salable, and given attractive Colonial exteriors. The houses were placed on good sized lots of 45 x 100 feet, which have since been increased to 50 x 100 feet.

The basic Hillside Heights house plan was a little four-room Colonial, 27 x 25 feet in size (published in the August 1936 issue of *American Builder*) which was sold for \$2,500 on a 40 x 100 foot lot. This \$2,500 house was made the basis for extensive advertising and publicity which brought out thousands of people.

However, when people compared this house with others available at a little more money, it developed that the more completely equipped houses with basements sold better. As a result, by far the majority of sales at Hillside Heights have been for houses with full basements and with second stories that can be finished and used. Thus, the price range has edged upwards, with many of the sales in the \$3,500 class.

WITH over-all dimensions of only 24'x29' 6", this plan provides a comfortable, livable house at low cost. It is placed on a plot 45x100'.



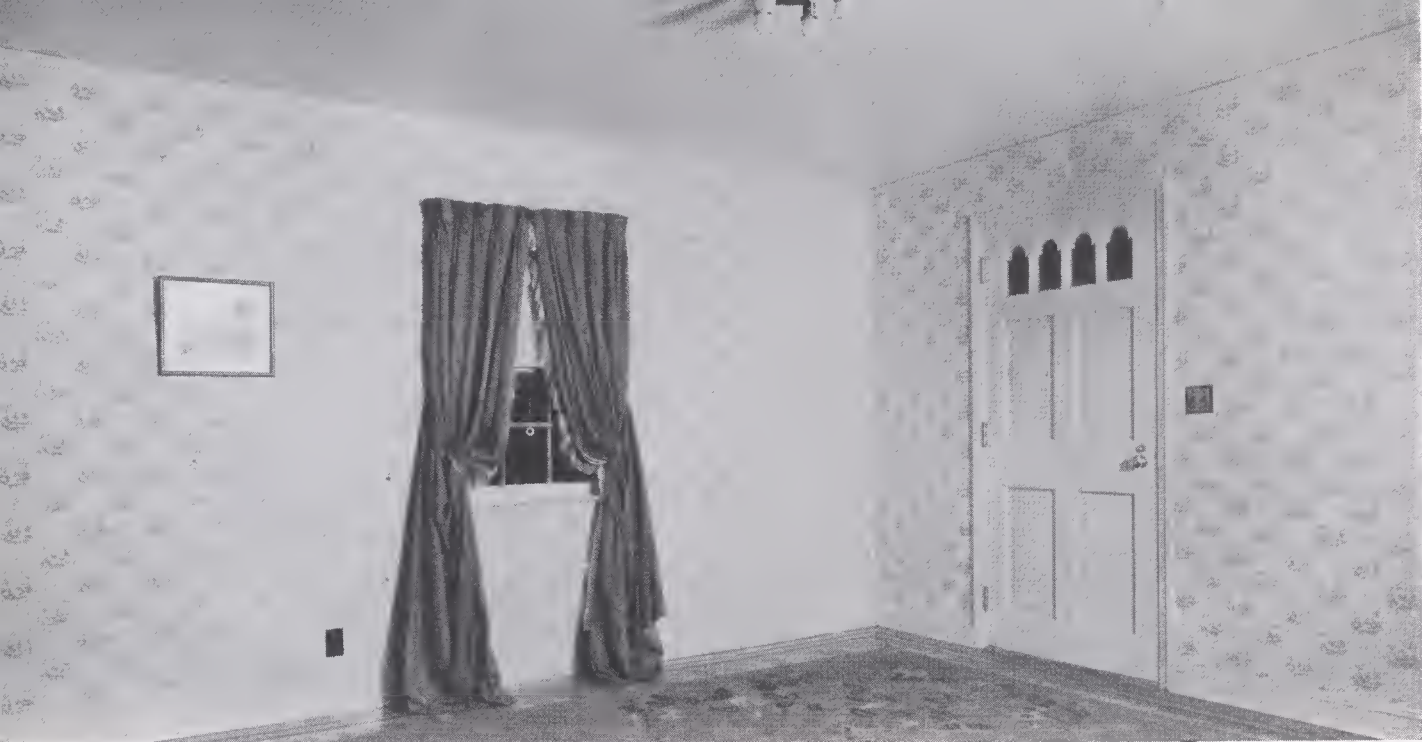
The Hillside Heights advertising uses the phrases, "Sponsored by" and "Inspired by" the Federal Housing Administration. Financing is on the FHA twenty-year plan and the costs are clearly stated to the prospective buyer in the following fashion for a house that sells for \$3,550 on a plot 45 x 100 feet:

Down payment	\$ 750
Balance due on 20-year FHA mortgage.....	2,800

Monthly Payments	
Principal and interest	\$20.80
Taxes	8.12
Water	1.00
Fire insurance42

Total monthly payment	\$30.34
-----------------------------	---------

It is obvious that on a low cost house such as featured at Hillside Heights, the profit on the individual house must be kept at a reasonable figure. However, the fact that there are ten good prospects for a \$3,500 house to one for a \$7,000 house makes the sale much easier and surer, and makes possible a volume that increases profits at a desirable rate.



LIVING room of the lowest priced Hillside Heights model. Decoration and trim are simple, cheerful, attractive. This living room is 12'6"x15'6".



BATHROOM of the low cost house at left has tile floor, wall-paper walls. Standard white plumbing fixtures.

Profit on land is, of course, an important item in a project such as this. It is estimated that the average cost of a Hillside Heights lot is \$670. This consists of approximately \$560 for improvements and \$110 for land, which is purchased at \$1,000 an acre.

Realty Associates have apparently found that there is more profit in the higher priced houses. The average sale price of the first 100 houses was \$3,218. It is estimated that the average building cost of these houses was \$2,345, which indicates an average profit on each sale of a little more than \$200.

A study of costs of the first 100 houses indicates the following breakdown:

Excavation, masonry.....	\$ 365	Interior and exterior paint.....	\$ 125
Framing, carpentry, flooring.....	270	Special items including range,	
Lumber and trim.....	525	linoleum, shades, medicine	
Plaster.....	200	cabinet, planting, permits,	
Heating, plumbing.....	285	water and gas service, etc.....	215
Sheet metal and roofing.....	140	Supervision and overhead.....	100
Rough and finish hardware.....	50		
Wiring and fixtures.....	70	Total construction cost.....	\$2,345

Low cost houses in Hillside Heights are made possible by careful planning that eliminates unnecessary extras. Equipment is complete but not unnecessarily

expensive. All buying of materials and equipment is done through a purchasing department. Houses are done under conditions approaching mass production so that operations are standardized. Each operation is sublet to subs who become proficient in their line as each job is repeated and eliminate waste motion.

In the first model \$2,500 house at Hillside Heights, the heating plant consisted of a small hot water boiler located in the kitchen. In later models, with a basement, a low priced pipeless furnace of the recirculating type, with register placed in the center hall, was used.

Following suggestions from the FHA, the Hillside homes have been improved in construction quality so that they are comparable with many much more expensive houses. Diagonal sheathing is used on the walls, all openings are double studded, fire stops are included, copper flashings are provided and attics are fully finished.

An attractive appearance is given the developments by varying the exterior designs and materials somewhat. In addition, the arrangement of the houses has been staggered. This, coupled with the variation in placing of the designs, gives a variety and interest that has proved a great aid to sales. The day of monotonous rows of houses closely resembling each other is apparently past—even in the lowest cost bracket.

The following brief outline of materials and equipment gives an indication of the way in which the low cost Hillside homes are built:

FOUNDATION—High quality 8" concrete placed in steel forms which are used over and over.

FRAMING—Sills 4x6; corner posts built of two 2x4's and one 2x6; plates 2x4 lapped at all intersections; first floor girder 6x8"; floor joists 2x8", 16" o.c., doubled under bearing partitions; bridging 1x3" double spiked not less than 8' o.c.; ceiling joists and rafters 2x6, 16" o.c.; collar beams 1x6 or 2x4 every third rafter. The ribbons are 1x4 let into studs and spiked. All openings are double studded with jack stud and doubled 2x4 headers set on edge for openings not over 3' 4" in width, and double 2x6 set on edge or trussed when of greater width.

EXTERIOR WALLS—No. 2 white pine or redwood 7/8" x 10" beveled siding laid 8" to the weather. Wall shingles are 18" long red cedar applied 7" to the weather. Heavy felted building paper is used.

ROOFS—Asphalt square butt strip shingles applied over 24 lb. saturated tar felt.

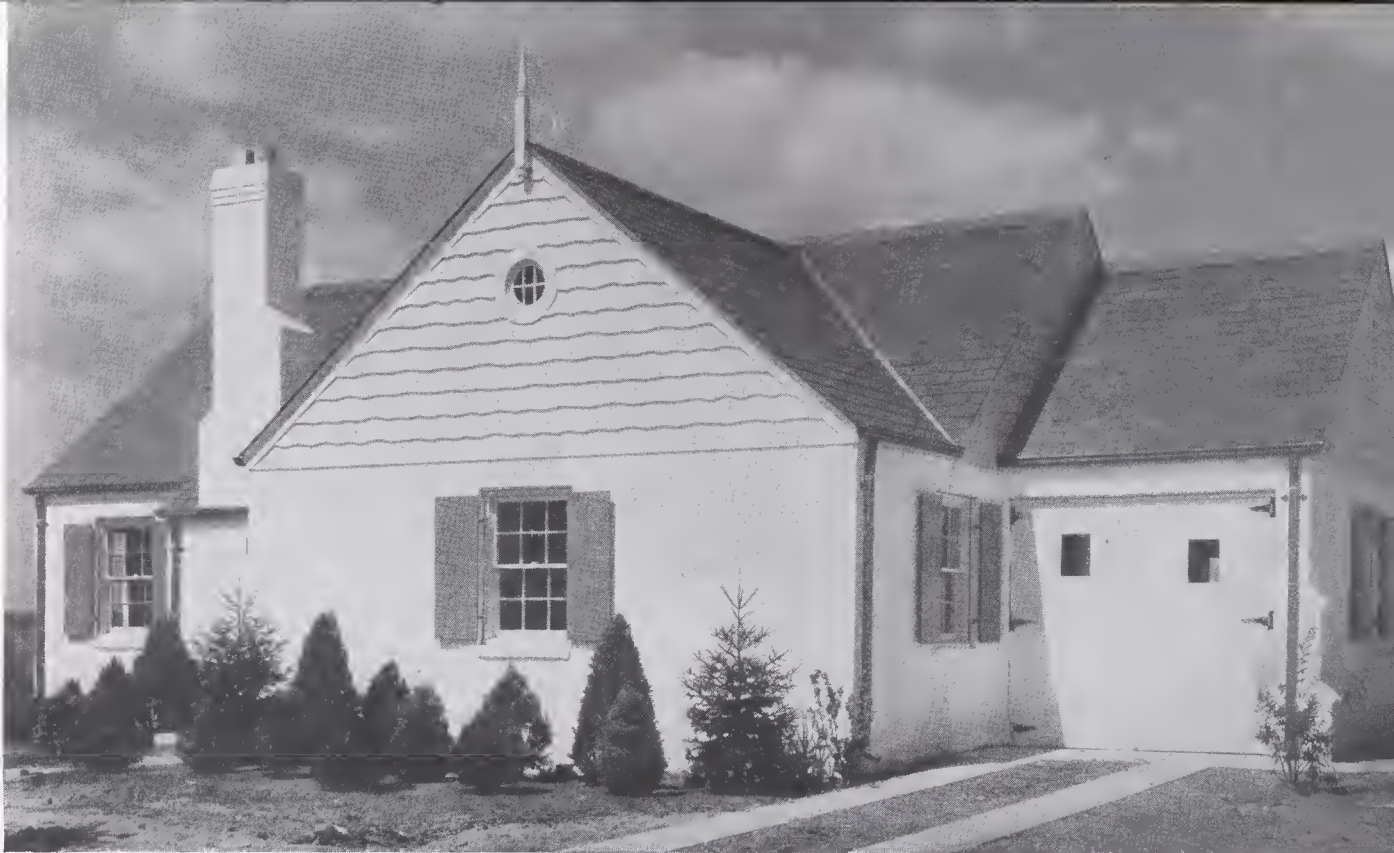
FLOORS—No. 2 red oak 7/8" x 2 1/4" t. & g. In kitchen plywood is laid over rough flooring and then covered with Armstrong linoleum. Bathrooms have ceramic tiled floors laid over 3" cinder concrete.

PLASTER—Wood lath with three coats plaster. Sanitas washable wall-paper in kitchens and bathrooms.

PAINTING—Interior—2 coats lead and oil. Floors—3 coats shellac. Exterior walls and sash—2 coats lead and oil.

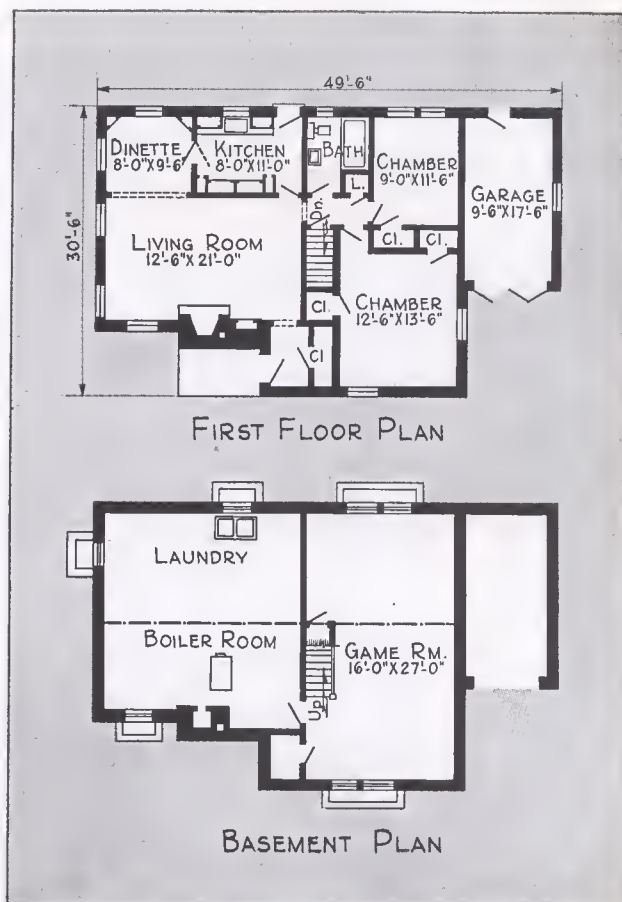
PLUMBING—Extra heavy cast iron soil pipes. Copper water pipes. Fixtures by Standard Sanitary Manufacturing Co.

HEATING—Thatcher pipeless furnace of recirculating type, or American Radiator hot water one-floor system. At extra cost, American Radiator Co. boiler and radiators with Jenkins valves are provided. Hot water is provided by a Boyton heater with 30 gal. galvanized iron tank.



WHITE BRICK 5-ROOM BUNGALOW

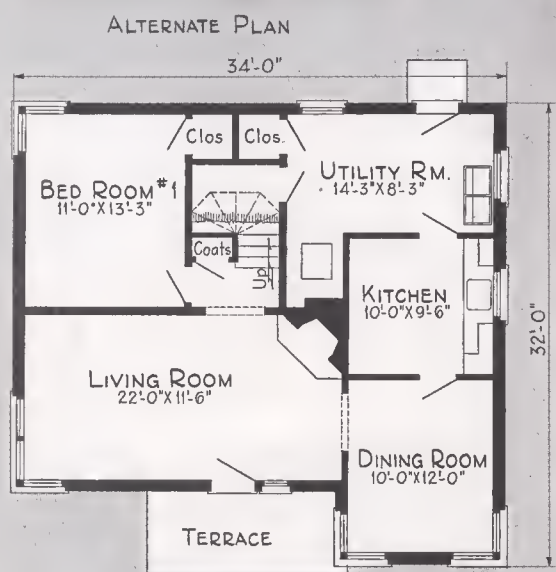
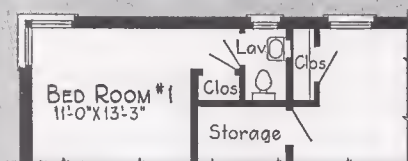
THIS is one of the popular Driesch homes at Westbury, L. I., designed by Fred Burmeister, architect. The exterior is of common brick, the roof of slate. The floor plan has a large living room with an attractive dinette separated by an arched opening. The garage is attached to the house and made a part of the design. Floor plan is compact, convenient.



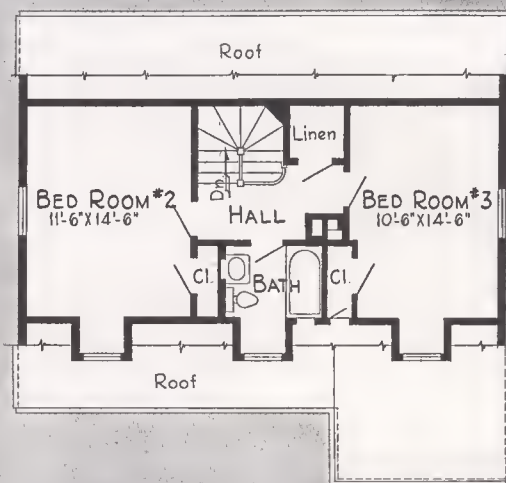


PLENTY OF ROOM WITHOUT BASEMENT

A UNIQUE and attractive exterior is combined with good planning in this house built by the Olsen Construction Co. of Pittsburgh; here again Hilary D. Watterson was the architect. A first floor bedroom is provided and an alternate plan gives an adjoining lavatory. Two more bedrooms and bath are placed on the second floor. Six closets, extra space under stairs and large utility room allow plenty of room for storage. The gas-fired winter conditioner is placed out of the way near the central chimney. As in all Olsen Utility Houses, the first floor is a reinforced concrete slab covered with a waterproof membrane and wood block floors laid in mastic.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

\$1,000 More House for the Money

E. E. Olsen Construction Co. of Pittsburgh Builds Basementless Utility Houses Which Allow a Cost Reduction of This Amount

By R. E. SANGSTER

TO BUILD with a basement or without a basement seems to be one of the prime controversial questions in house construction today. Nearly every builder has definite ideas either one way or the other on this subject (see articles, *American Builder*, September and November, 1936). The E. E. Olsen Construction Company operating in the Mt. Lebanon area near Pittsburgh now adds its experience with basementless, utility houses; backed by cost figures which were carefully kept, the heads of this organization believe that about \$1,000 in cost was saved on such houses as shown in this article.

The two men associated in the firm—E. E. Olsen, president and treasurer, and L. H. Nelson, vice-president—were originally in the heavy construction and engineering field. After observing several housing projects, particularly the Reedsville, Pa., development, they became interested in home building and studied current methods of construction and planning in the medium price range of houses for something new to offer the public.

New Kensington, 18 miles out of Pittsburgh, was finally decided upon as the site for a trial operation, and the first two basementless houses were erected in 1936 from plans by Fellheimer and Wagner, New York architects. When opened for inspection, the public reacted favorably to the utility room idea; in two weeks both



ABOVE, E. E. Olsen, president, (at left) and L. H. Nelson, vice president, of the E. E. Olsen Construction Co., Pittsburgh, Pa.

houses of four-bedroom size sold for \$6,250. This price included lot, grading, shrubbing and seeding complete.

This response was encouraging so larger operations were planned for the Mt. Lebanon district. A number of lots were purchased from the South Hills Company of Mt. Lebanon and the houses were offered for sale as completed.

Although the basementless house is accepted now in this district, it is not to be supposed that the idea was put across without a great deal of promotion and education at the start. But the added value or decreased cost made possible by the utility room proved a good sales argument—the houses compare favorably with similar living accommodations nearby which sell for about \$1,000 more (see cost breakdown on the next page). Also, the



AN ALTERNATE exterior treatment of the plan on the opposite page shows a conventional window placement instead of corner windows, hooded entrance and a variation of dormers and dining-room wing.

ESTIMATE SHEET No. 1. HOUSE No. 341-I

1. Excavation and Grading, Landscaping, Cinder-Fills and Drives, Concrete Footings and Slabs, Cement Finish, 6" x 6" No. 4 Wire Mesh, Sidewalks and Steps, Cinder Blocks.....	\$ 401.31
2. Brick and Stone Work.....	550.00
3. Carpentry Labor.....	450.00
4. Lumber & Millwork: Rough Lumber, Gutter, Finish Lumber, Siding, Millwork, Insulite, Oak Floors, Kitchen Unit, Garage Door, Wood Block Floors, Garage Material.....	1,395.00
5. Rough and Finish Hardware.....	75.00
6. Plumbing.....	490.00
7. Sub-Contracts: Painting, Rubber Tile, Heating, Electric and Fixtures, Plastering, Roofing and Sheet Metal.....	1,591.00
8. Miscellaneous: Architect, Insurance, Foreman, Permit and Survey.....	335.00
Sales Commission.....	237.00
Lot	1,000.00
Total	\$6,524.31
Sales Price	\$7,024.00
Cost	6,524.00
Profit	\$ 500.00

ESTIMATE SHEET No. 2: ALL MATERIAL AND LABOR FOR CONSTRUCTION BELOW-PLATE OF UTILITY HOUSE No. 341-I:

Trench Excavation, 708 cu. ft. at .04.....	\$ 28.32
Backfill, 390 cu. ft. at .03.....	11.70
Cinder fill to receive slab, 21 yds. at 1.00.....	21.00
Reinforcing mesh, 1,074 sq. ft. at .02.....	21.48
4" Reinforced slab over entire area, 11 1/4 cu. yd. at 9.00.....	101.25
Labor troweling and finishing, 976 sq. ft. at .02.....	19.52
Concrete footings, 170 cu. ft. at .35.....	59.50
Haydite Block Walls (cinder-concrete)	
299 sq. ft. 8" at .26	77.74
128 sq. ft. 6" at .19	24.32
	\$ 364.83
10% Overhead and Profit.....	36.48
	\$ 401.31

ESTIMATE SHEET No. 3: ALL MATERIAL AND LABOR FOR CONSTRUCTION BELOW-PLATE OF THE CONVENTIONAL BASEMENT HOUSE:

Main Excavation, 212 cu. yds. at .60.....	\$ 127.20
Footing Excavation, 176 cu. ft. at .04.....	7.04
Backfill, 1,285 cu. ft. at .03.....	38.55
Concrete Footings, 207 cu. ft at .35.....	72.45
12" Haydite Block Walls, 832 sq. ft. at .34.....	282.88
8" Haydite Block Walls, 128 sq. ft. at .26.....	33.28
3 Area Ways for Basement Windows at 10.00.....	30.00
4" Cinder fill for 10 1/2 cu. yds. at 1.00.....	10.50
4" Basement cement floor, 849 sq. ft., 10 1/2 cu. yds. at 9.00.....	94.50
Labor troweling and finishing, 849 sq. ft. at .02.....	16.98
1" Cement Plaster on Exterior of Foundation, 832 sq. ft. at .06.....	49.92
Extend Chimney and Fireplace Chimney to Basement.....	48.00
2 Lally Columns for Basement Girders at 11.00.....	22.00
Lumber for first floor Joist and 1/8" floor lining, 2,941 Bd. Ft. at 70.00M.....	205.87
Stairs to Basement with Door.....	48.00
3 Steel Sash for Basement.....	24.00
Extra for Plumbing in Basement House.....	48.00
Extra for Additional Heating Ducts.....	125.00
	\$1,284.17
10% Overhead and Profit	128.42
Total	\$1,412.59
Basement House groundwork.....	\$1,412.59
Utility House groundwork.....	401.31
Net Saving on Utility House.....	\$1,011.28

houses carry a full 80 per cent FHA loan. The latest promotion idea is a color movie of the project made by Mr. Olsen to show to prospects.

The 1937 program calls for the building and sale of 100 houses in three groups of 30 odd each. Exteriors on each of these will be different although several basic plans which have proved to be most workable will be used with variations. Hilary D. Watterson of Pittsburgh is the architect responsible for the attractive and efficient designs. Sales are handled by the South Hills Company of Mt. Lebanon.

On pages 66, 67 and 68, three typical houses are shown with plans. It will be noted that the utility house has not been limited to any particular size; the first is a full two-story four bedroom Colonial type home, the next is a Cape Cod cottage with two bedrooms and alternate exterior, and the third is a one and a half story design having one bedroom on the first and two on the second floor. In all cases, the room arrangement has been worked out for maximum space use and economy, but at the same time plenty of storage has been provided by the numerous closets and the generous proportions of the utility rooms.

The careful planning of these rooms which contain the gas-fired winter conditioning units and laundry facilities has been the key to success in overcoming common objections to basementless houses. Heating plant, well located to one side and near a chimney flue, good lighting for laundry trays and easy access from kitchen and outside are some of the provisions included. Also, there is ample storage space for average requirements and enough room for hanging clothes inside; a grille on the heat supply can be opened to allow passage of additional warm air into the utility room for more rapid drying.

The floor slab and wall construction involved in these houses has been carefully designed and has proved entirely satisfactory. A cross section drawing at the right shows these important details.

The first building operation is to level the side down to solid ground so that the slab is not over filled earth. Concrete footings 8" x 24" placed 3 feet below grade support 8" concrete block foundations; under bearing walls, piers are placed so that no span is more than 7 feet. A cinder fill having a 5-inch minimum depth is placed level with the foundation top, over which a 4-inch slab reinforced with 6" x 6" No. 4 wire mesh is poured. A most important item is the dampproofing with 30 lb. saturated felt laid in emulsified asphalt. This extends over the concrete floor surface up above baseboard height behind plaster base and also down the sides to the top of



ABOVE, two basementless houses in New Kensington, the district where the Olsen Company started home building. At the left, cost breakdown of the 1 1/2-story utility house shown on page 56.

the foundation (see detail). A finished floor of Bruce block is laid in mastic over the membrane. With this construction the usual basement floor is moved above grade to replace the first floor.

A table on the opposite page shows a cost breakdown of the house on page 68 as taken from three work sheets. The house was built within the past year and, although there will be some variation due to increased costs, the relation shown between this house with and without basement will still be about the same. In explaining this data Mr. Olsen states:

"Even a quick study of the figures will reveal just what the situation is as far as actual costs are concerned and they do not include a sum that could be rightfully set up for, let us say, efficiency, which we find is an important item in production. That is, much is saved in time, energy and labor in working around a group of houses that do not have mountains of excavated loose dirt to work over. We can with this type of construction get in and out with a minimum of lost time.

"Sheet No. 1 is a complete estimate taken from our records. You will note that the total cost is \$6,524 and that the sales price is \$7,024, including commission, lot and contractor's profit. Sheet No. 2 shows item No. 1 of Utility house estimate broken down. Sheet No. 3 shows a breakdown of below-the-plate-construction, if a basement were to be put under this same house on the same lot and under the same conditions that existed on Utility house. The comparison on bottom of sheet No. 3 indicates a saving of \$1,011.28 for the Utility house in dollars and cents—to say nothing of what the 'efficiency' item is worth to the contractor. From the owner's point of view, he has the same space, same number of rooms, a more substantial house and a more modern and convenient place in which to live—and all for a lesser amount of money."

It should be added here that local conditions in various parts of the country would affect the savings shown for these houses. Different combinations of circumstances covering labor scales, excavating problems, materials, etc., could alter the final results quite substantially. For instance, gas is a popular and economical fuel in their area, the average cost of gas fired winter conditioning on these houses running about \$8.00 to \$10.00 a month. It eliminates the need of space for fuel storage and shorter ducts can be used by placing the plant on first floor level. The cubage devoted to the utility room would of course be available for other purposes if basements were included in these houses. However, as the Olsen Company points out, the average use of large basement area for heating and laundry facilities and excess storage space does not warrant the difference in cost when construction economy is a primary consideration.

The following outline specifications will indicate the thoroughness of construction found in Olsen houses:

FOUNDATION: 8" concrete block walls—24" footings.

FLOORS: 1st—5" reinforced concrete slab on 5" cinder fill.

STRUCTURAL STEEL: Steel lintels over all openings.

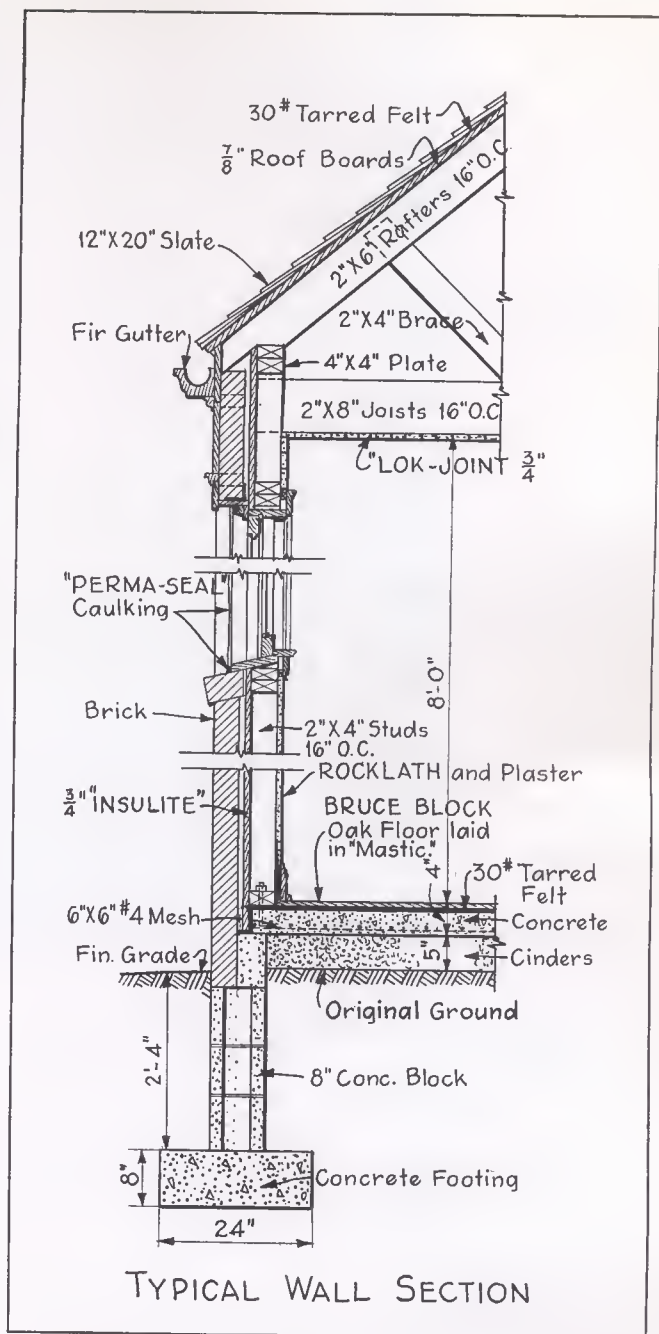
SEWERS: 6" soil line (extra heavy) to sanitary sewer.

CONSTRUCTION: Brick or stone veneer over wood frame, $\frac{3}{4}$ " Bildrite Insulite board. Lumber, No. 2 Y.P.

INSULATION: Rigid insulation $\frac{3}{4}$ " Insulite on wall. $\frac{3}{4}$ " Lok-Joint ceilings.

STAIRS: Oak treads, pine risers, birch rails.

ROOF: Slate, $\frac{3}{16}$ " x 12" x 20".



GUTTERS: Fir, asphalted miters.

SHEET METAL: Downspouts and conductor heads copper, 16 oz.

FLOORS: 1st floor—Bruce Block layed in mastic; 2nd floor, select white oak over subfloors.

LATH AND PLASTER: U. S. G. Rocklath throughout, metal corners; garage walls and ceiling metal lath, cement plaser; 6" base in Utility Room.

HEATING: Pennsylvania gas fired furnace, full automatic controls. Forced air.

PLUMBING: Richmond tub—remainder fixtures Universal. All fittings chromium. Duo-Strainer in sink.

ELECTRICAL: B-X throughout. Radio antenna in attic.

FIXTURES: Chase Brass, choice by owner.

GLASS: Libbey Owens "A" quality.

WEATHERSTRIPPING: Zinc on windows, copper on doors, interlocking brass thresholds.

LINOLEUM: Armstrong, inlaid feature stripe.

HARDWARE: Russwin dull brass, brass butts. Nickel in bath and kitchen.

What! No Basement?

The idea shocked conservative New Englanders, but new type insulation and air conditioning made it practical and economical—and gives more house for the money. Costs only \$5 a month to heat.



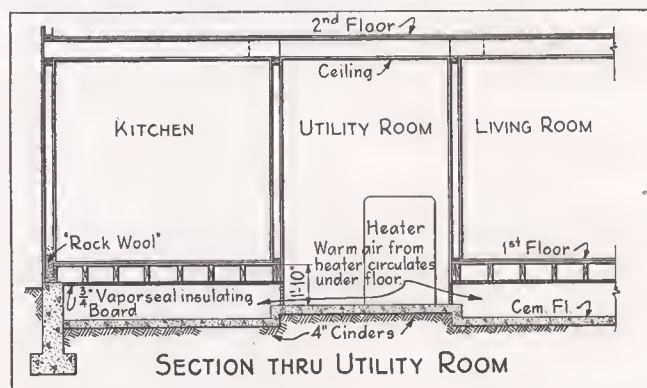
THE basementless home controversy which has been raging in *American Builder* for, lo, these many months has a vigorous new entrant from—of all places, New England. There we find architect Robert L. Stevenson, a well-known small house expert who says that cellarless houses are not only cheaper to build, but less expensive to heat and more convenient. He has proved this “more house for the money” idea to his own satisfaction in the construction of several houses of this type, one of which is here illustrated.

Two floor plan arrangements of approximately the same exterior design have been built by MacDonald Brothers, Medford, Mass., builders. As indicated in the plans opposite, these have a utility room that contains the heating plant, laundry tubs, hot water heater, storage closet and, in one of the houses, a toilet. The floors are insulated with a $\frac{3}{4}$ " layer of Celotex “Vaporseal.” The heating unit consists of a Superfex warm air conditioner set at the ground level and provision is made for the circulation of warm air under the first floor.

“Many of the early Colonial homes were built without cellars,” declares architect Stevenson. “Only a small space was excavated for a vegetable cellar. Our modern methods of heating and insulating were, of course, unknown to the early builders.

“In the cellarless house today there is a saving not only on the construction and the heating and plumbing installation, but also on the fuel bills. This results from the short runs from a centrally located heater, and from the fact there is no basement to heat. The house illustrated cost only \$5 per month to heat last year.

“A method of building these homes so as to prevent cold floors must be met. This is accomplished by insulation and by planning the utility room so as to provide warm air from the heater room to circulate in the air



DETAIL OF BASEMENTLESS floor construction and utility room showing use of $\frac{3}{4}$ " insulation board and air circulating space under first floor.

chamber under the first floor as in drawing above.

“The cellarless houses which were developed a few years ago were not popular in New England due, perhaps, to their inability to lend themselves to the conventional type of steam and hot water heating and the lack of proper insulation material to prevent cold first floors. Furthermore, hot air furnaces were not in favor a few years back due to dust and dirt from this type of equipment. Today with modern equipment, a blower and filter, the once frowned upon furnace has become a most popular form of small house heating.

“With new methods of heating and insulating our homes, I believe that the house of the future for the man with moderate income will be without a cellar. Economy of construction and low fuel costs are the essence of this type of house.”

COUNTRY COLONIAL

1st FLOOR BEDROOMS

SOMETHING about the good proportions and careful detailing of this Colonial house puts it in a class by itself. It was built by Homecraft Builders in the Mayfair Acres development near White Plains, N. Y., and was one of the best received and most popular designs of the year.

THE BROAD ANGLE of the gables, the nice proportions of the attached garage and the unusually fine dormer help achieve this charming effect. It is a comparatively inexpensive house but has many features which are found in the higher brackets.

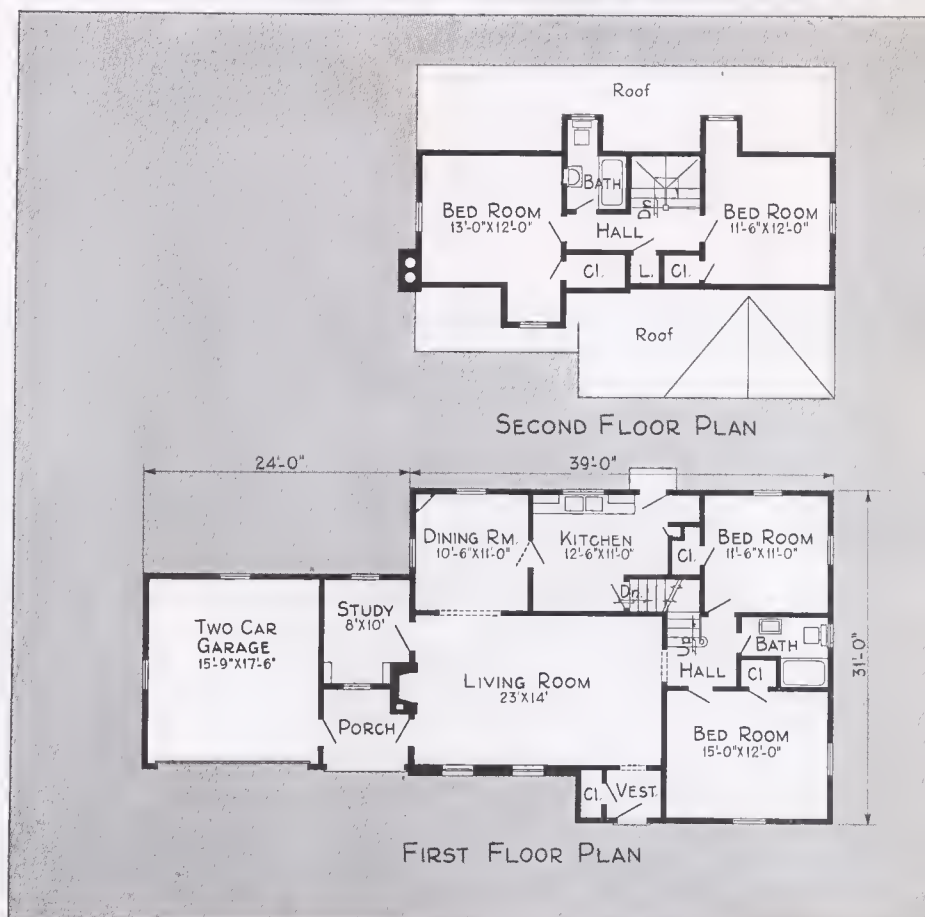




4 BEDROOMS AND STUDY

FOR a small family this house is ample without finishing the two bedrooms and bath upstairs. The two bedrooms and bath downstairs are well arranged. The small study or office off the living room is a feature desired by many people. A two-car garage is provided and connected by an open porch that is architecturally very well done and also practical.

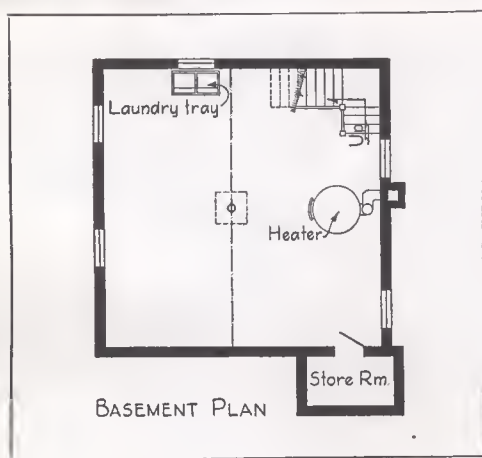
SPECIFICATIONS include Reynolds fire-safe joists and precast floor slabs, a Reynolds air conditioning system with oil burner, Curtis Silentite windows, 18-inch Perfection red cedar shingles on roof laid $5\frac{1}{2}$ inches to weather. Side wall shingles are No. 1, 24-inch shingles. Interior woodwork, doors, stairs, trim by Curtis.



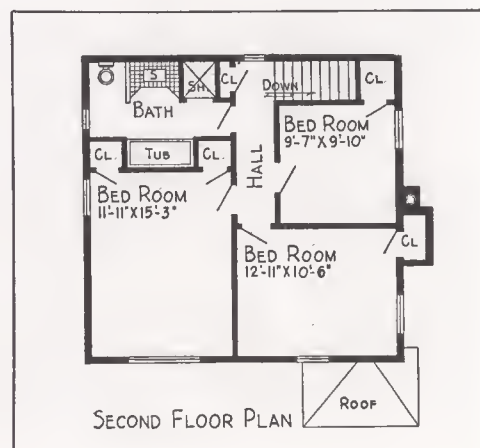
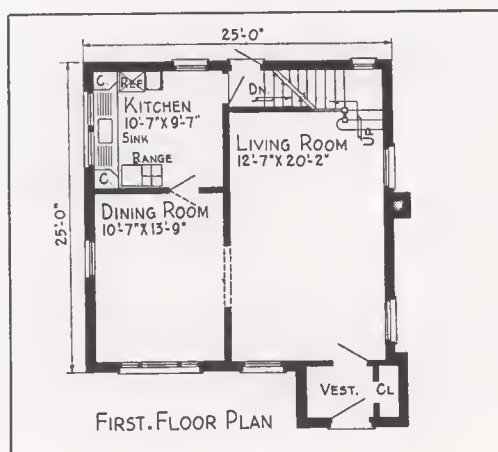


COMPACT ENGLISH 25'x25'

Arthur E. Allen,
New York, Architect
A. B. Wolosoff, Builder

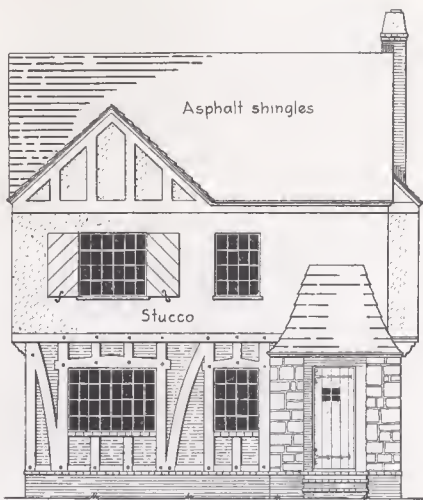


THIS HOME is one of the popular designs of Architect Arthur E. Allen of New York, who has designed many thousands of practical and successful homes for builders on Long Island and elsewhere. This particular floor plan was developed for Alvin B. Wolosoff and it proved one of the successful forerunners of the present building activity on Long Island. With a basic plan of only 25 ft. by 25 ft., the builder is able to provide 6 good rooms and bath, with ample light and sufficient closets. A number of variations in the exterior have been used, and one of these is shown on the opposite page. It is possible to face the house with the living room the long way towards the street, or to reverse the plan completely. Plans call for 12-in. concrete basement, 3 by 8 joists on 16-in. centers, 2 by 8 rafters on 16-in. centers. The slight overhang of the second story provides needed bedroom space.

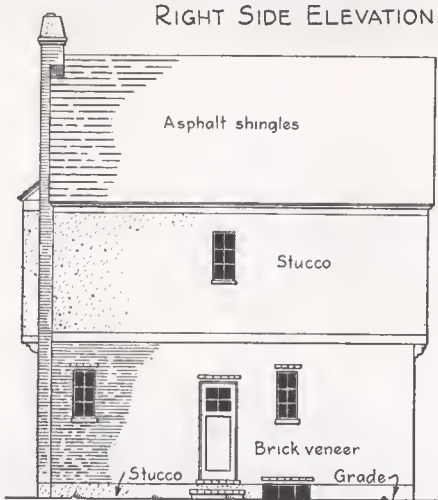




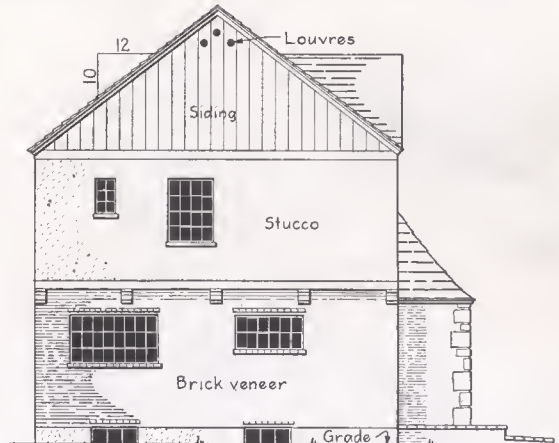
RIGHT SIDE ELEVATION



FRONT ELEVATION



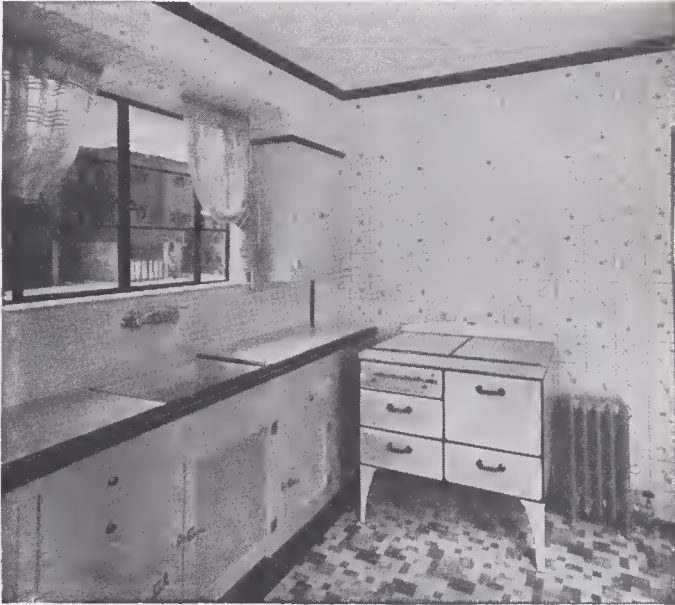
REAR ELEVATION



LEFT SIDE ELEVATION



AN ALTERNATE design with center entrance.



KITCHEN is light, cheerful, well equipped.



FOR THE SMALL INCOME NEAR DETROIT—A MODEL “HOUSE THAT GROWS”

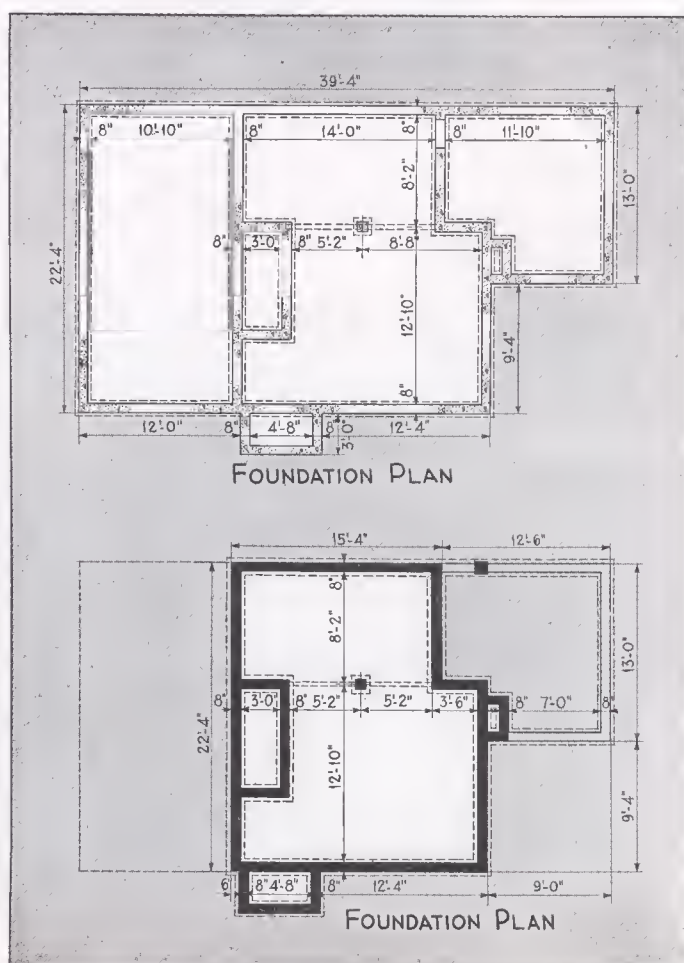
**Sponsored by Garden City Civic
Association, Garden City, Mich.
Designed by Small Homes
Associates, Architects, Detroit**

MORE HOUSE VALUE for the low income group of Garden City, a Detroit working man's community, was the aim of the local civic association in sponsoring this year's three model homes. Each home represents a stage in a "multiple unit" plan to provide a small low-cost house which grows with the financial ability of the owner, and at the same time offers a properly designed, practically planned and well built home during the expansion. The purpose was to encourage people to build something that would be a credit to the community and eventually grow into a home that would not be a monstrosity of design and construction.

The three homes, as shown above, present these various stages. From the plans it can be seen that very little changing is necessary in completing the house. There are no partitions to be torn out, and no remodeling is needed. The addition to unit No. 2 requires only the changing of two windows to doors and the cutting of an opening from the hall into the living room.

Garden City, in which these houses are built, is a neighborhood combining urban facilities with small farm advantages. Garage and chicken house complete unit No. 3 on a garden plot. Each of these units is landscaped in accordance with the stage of completion. The 70,000 visitors who inspected these houses during the two months they were open gave a good indication of the interest in such projects.

ABOVE, to the left, Garden City model home No. 1 provides a living room, two spacious closets, a large kitchen with corner dinette and fruit cellar under the stairs, and a large bedroom with bath on the second floor. Exterior walls are batted Celotex Vaporseal sheathing painted with aluminum. For economy the U.S.G. Rocklath plaster base and pine subfloor temporarily serve as interior finish. Later, seen in unit No. 2, a utility room is added; interiors



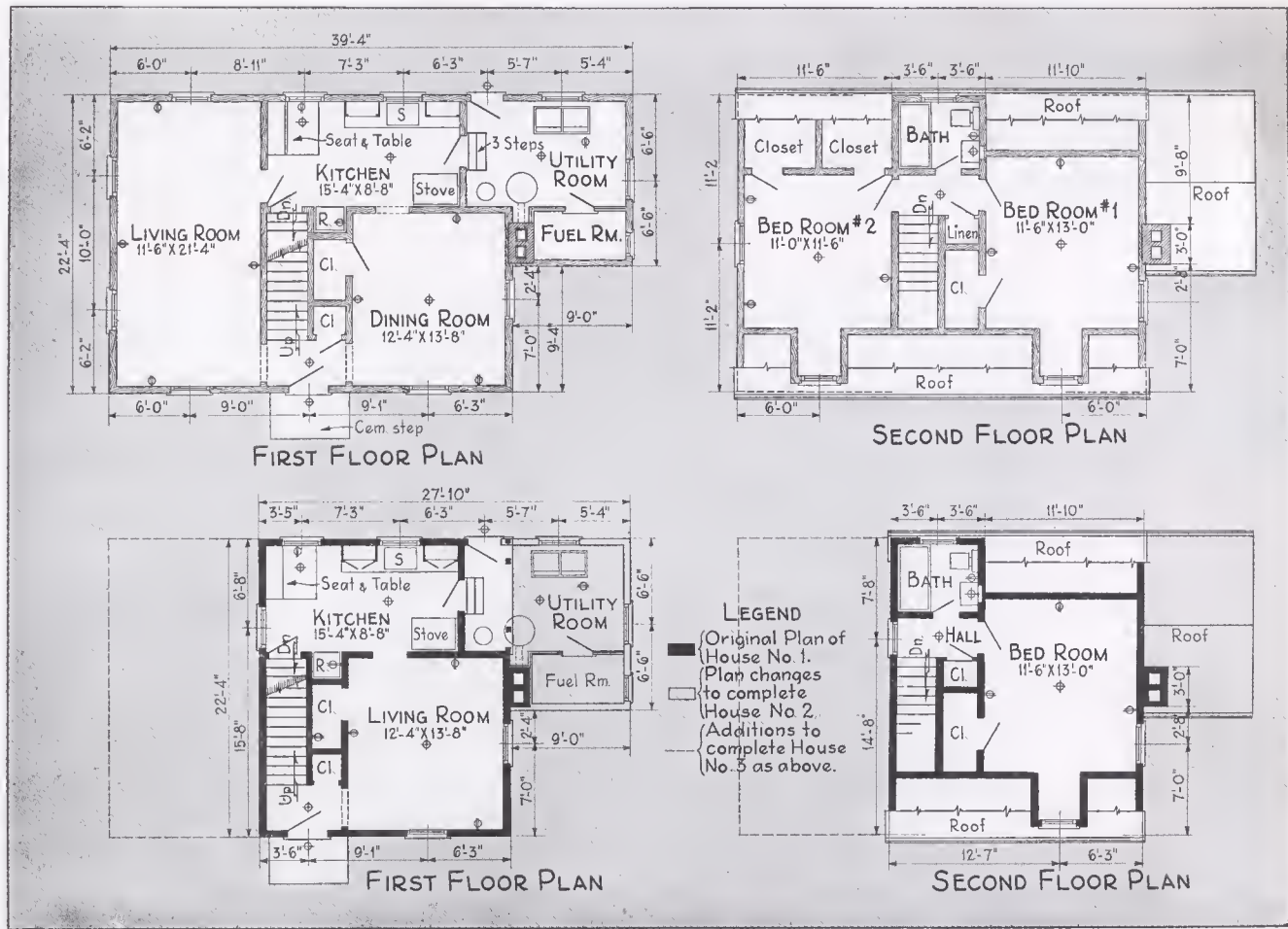


LEFT, on opposite page: Unit No. 1 of Garden City multiple unit homes offers minimum housing. In unit No. 2 a utility room has been added and walls finished.

THE completed house—unit No. 3 at the left—has had the two-story living room and bedroom wing added.

are finished, and the insulation board exterior is covered with beveled siding. Finally, in unit No. 3 a two-story addition provides a large living room on the first floor and an additional bedroom on the second floor. The original living room then becomes a dining room, and the five-room house is complete. A roof of edge-grained red cedar shingles has been used so that roof on additions can be stained to match previously applied shingles.

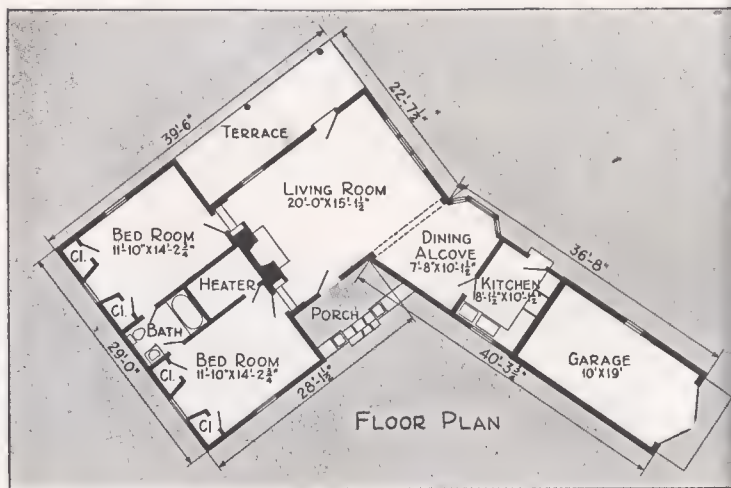
The thoroughness of construction is indicated by the following highlights: Cement block foundation walls on poured footings; terra cotta flue lining; crock drains from downspouts; yellow pine framing, corner braced; 2" x 2" joist bridging; diagonal sub-floors; beveled red cedar siding; Curtis Silentite windows; white pine interior trim; 2-coat plaster on Rocklath; 26 gauge galvanized flashing and gutters; Standard fixtures; forced hot water heating.





BUILT AT AN ANGLE

UNUSUAL small house, designed by Architect Robertson Ward and built by Contractor John C. Smith in New Canaan, Conn., is built on an angle providing unusually good light and view. There is no basement. Floor is a concrete slab which follows exact grade with no filling or grading. Wood block floors were laid on the concrete. Air conditioning unit is located in heater room behind fireplace. The cubage is 14,000 cu. ft. Walls of heater room are sound-proofed.



WOOD paneled fireplace dominates the end of the living room. Air conditioning unit enclosed in a sound-proofed room is located directly behind fireplace between 2 bedrooms. The ceiling treatment and arched door openings are unusually interesting.





CHAPTER III

LOW COST HOMES THAT PAY THEIR WAY



FLOOR PLANS ON PAGE OPPOSITE

A PRACTICAL SUGGESTION

AN ENTERPRISING group of building industry men in Davenport—Rock Island—The Molines (The Quad Cities) have distributed a book, "The Truth About Building Value." In it this practical advice to the prospective home builder is given:

"You'll Find It Interesting to Conduct Your Own Investigation About 1938 Building Values

"We suggest that you

"1. Pick out a plan that you like. Study the room arrangement. Determine what features you would want in your home to make it the most pleasant, convenient, modern.

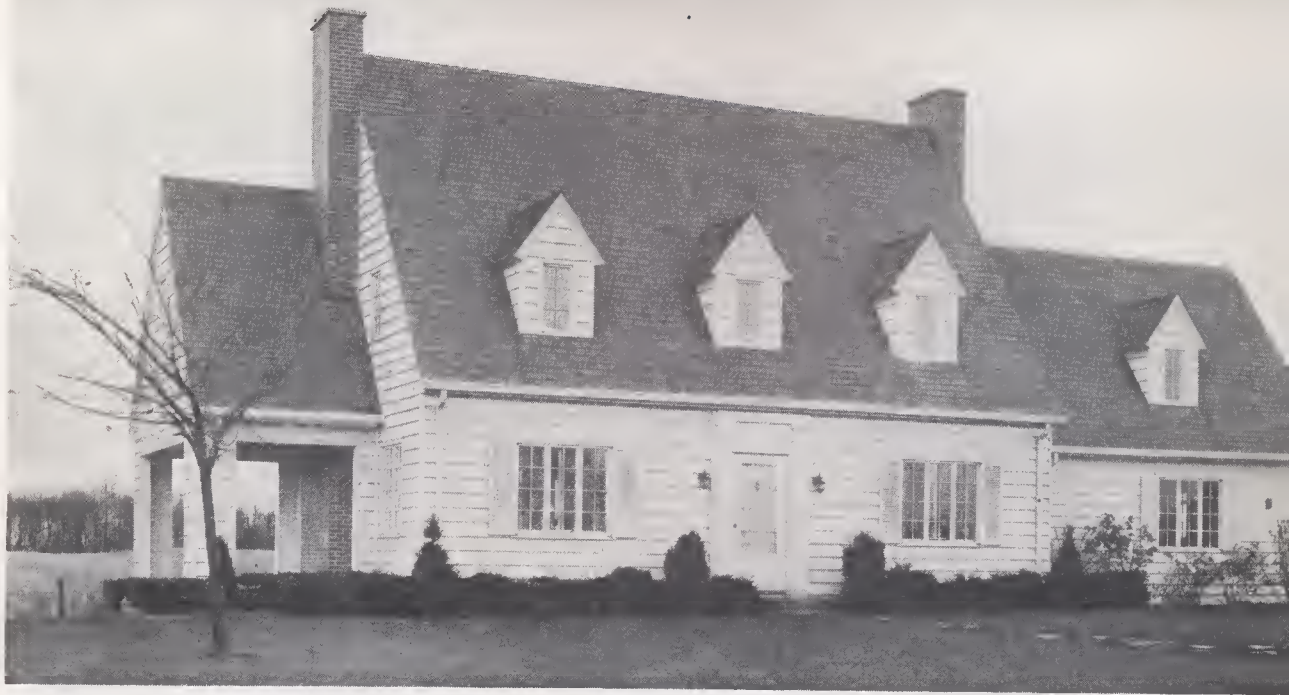
"2. Pick out a lot upon which you would like to build the home you have chosen. You can get the price without needing to buy the lot.

"3. Ask a lumber dealer, contractor or architect for an estimate of what it would cost to build the home you have selected.

"4. Take your lot cost and building estimate to your building and loan association or bank and find out what it will cost you in monthly payments to finance, live in and finally *own* that home.

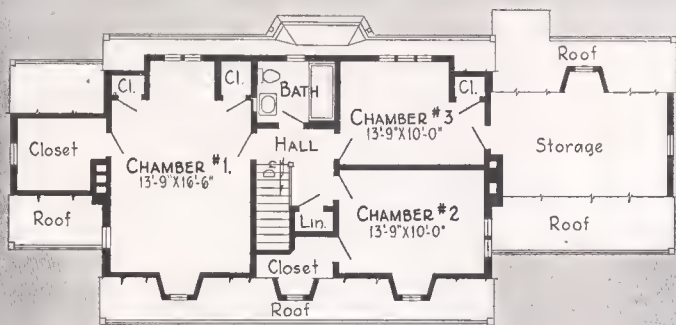
"The results will amaze you. You'll find that collecting rent receipts through the years leads to nothing, whereas, your purchase dollars will not burden your budget a bit more than rent, and will lead to complete home ownership at the end of the loan period.

"Then you'll see the wisdom of creating a family estate against future needs in later years, with meanwhile the priceless benefits to father, mother and the children which come from living in a bright, cheerful, modern home of your own."

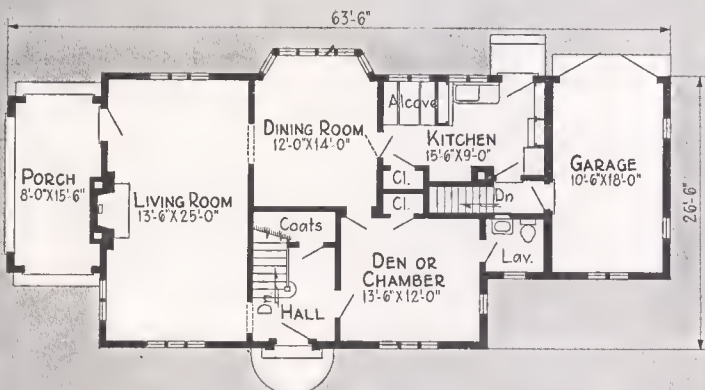


"DRI-BILT" HOUSE IN ASHLAND, OHIO

Presented in full color opposite



SECOND FLOOR PLAN



FIRST FLOOR PLAN

**An All-Lumber Home Having
Seven Rooms and Attached
Garage, Designed by Architect
A. Raymond Ellis, Hartford,
Conn. S. H. Hanville, Owner**

For Interior View and Specifications see
next page.

THE EXTERIOR of the above home is designed in the popular Cape Cod style with garage and living porch wings to balance at the ends and give the appearance of increased size. In plan the layout is efficient; good circulation, plenty of storage facilities and a minimum of waste space are found on both floors. A large bay in the dining room overlooks the garden view to the rear. Lighted breakfast alcove is conveniently located. The den or book room with adjoining lavatory shown on the opposite page can be used as an extra guest room when needed. It has walls richly finished in luan plywood paneled with black walnut; mahogany doors further add to warmth of the wood finish. The specifications indicate a wide use of plywood throughout the construction of this house.



THE DEN can be converted into a guest room; the combination of woods used for wall finish and trim is very pleasing.

OUTLINE SPECIFICATIONS

FOUNDATION: Concrete footings; 5 x 8 x 12 tile walls; basement and garage floors, 4" concrete; drain tile around wall to insure dry basement.

EXTERIOR WALL: 5/16 Westboard sheathing; brown 1" mesh rope Kraft waterproof paper; 3/8" plywood furring strips 16" on center; 3/4 x 10 cl. Maltese Cross red cedar siding.

EXTERIOR FINISH: All clear Maltese Cross red cedar; fir gutters; roof, 5X clear 16" Maltese Cross red cedar shingles; chimneys, common brick.

EXTERIOR DOORS: House, 1 3/4" white pine; garage, 1 3/4" fir, overhead type.

WINDOWS: Andersen casements equipped with double glazing and screens.

EXTERIOR PAINTING: 3 coats of Truscon house paint.

FRAMING LUMBER: Weaver Bros., Shreveport, La.; No. 1 Y.P.; all sub-floors 5/16" fir plywood sheathing.

FINISHED FLOORS: Dining room, living room, hall and book room—3/4" laminated random plank oak flooring, Tudor finish; kitchen, back hall and lavatory downstairs—sub-floors 3/4" No. 2 D. & M. Y.P. covered with 1/4" Westboard, wallboard grade, this covered with inlaid linoleum. Upstairs: Bedrooms and hall, finished floor

3/8" x 2" oak, Tudor finish. Bath, sub-floor 3/4" No. 3 Y.P. 1 x 6 D. & M. covered with 1/4" Westboard, wallboard grade, this covered with inlaid linoleum.

BATHROOM WALLS: Shower and 4' high outside shower, Marsh wall tile; ceiling of bath 5/16 Westboard sheathing grade covered with Sanitas canvas, painted.

ALL INTERIOR WALLS except kitchen, lavatory, closets and book room, covered with 5/16 Westboard, sheathing grade, nailed and glued to studs, with 2 x 4's laid in so that all joints of plywood have solid surface to nail to. This covered with Sanitas canvas, painted with Truscon Ascepticote. Book Room Walls: 1/4" Buffco luan plywood paneled with black walnut, finish black walnut; doors 6 panel 1 3/8" Philippine mahogany. Kitchen, Closets and Lavatory Walls: 1/4" Westboard, wallboard grade, painted with Truscon Ascepticote. All other interior doors, except as mentioned above, 1 3/8" white pine 6 panel.

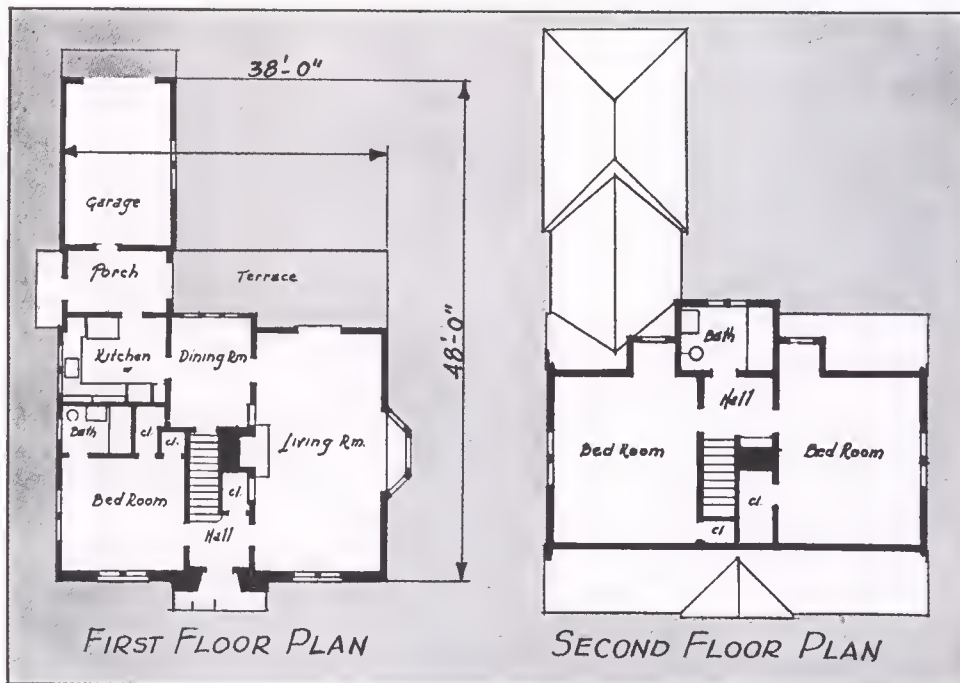
INTERIOR TRIM: Clear sap popular, ivory enamel finished.

HEATING: Vapor system, gas fired.

PLUMBING: Copper pipes; Humphrey Mfg. Co., Mansfield, O., fixtures.

INSULATION: Ceiling of second floor, 2" rock wool. All doors and windows weatherstripped.

WATER HEATER: Full automatic control.



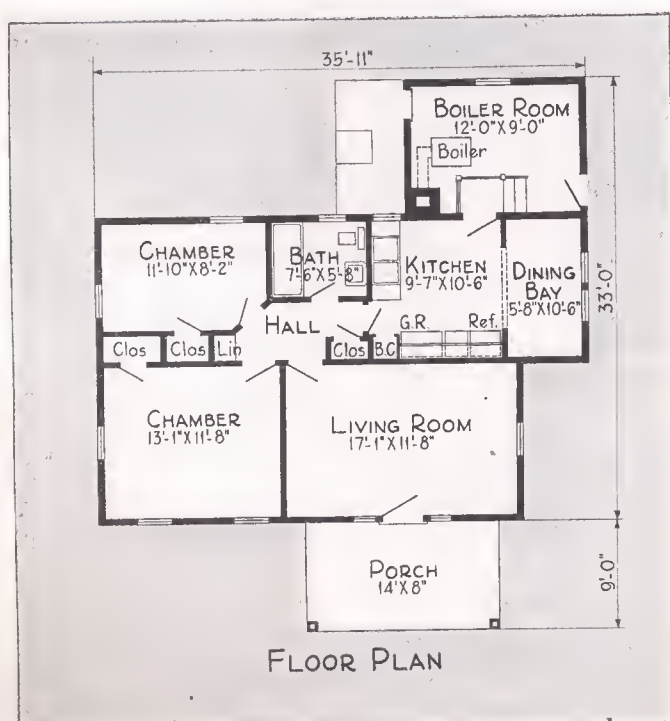
1ST FLOOR BEDROOM AND BATH

Mayfair Gardens, Inc.
Builders
Clarence H. Tabor,
Architect

MODEL HOUSE located in Mayfair Gardens, new subdivision at Demarest, N. J., features a downstairs bedroom and bath and an attractive rear terrace with screened back porch. The front door is deeply recessed, giving life to the white brick facade. Specifications include Arco hot water heating with Anaconda copper tubing, brass pipe, Magic Chef range, Weyerhaeuser lumber.



4-ROOM BUNGALOW WITH DINING BAY



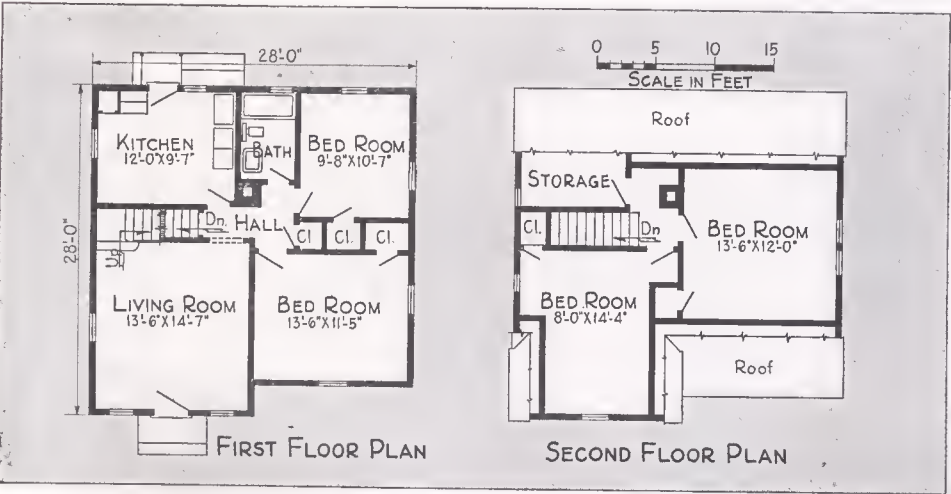
THIS practical one-story house is one of the recent popular designs built in Hewlett Point Park, L.I., by Realty Associates. It is well proportioned and has a generous front porch that appeals to many people.

A boiler and utility room off the kitchen is an unusual and practical feature of this house. There is no basement. The utility room, however, serves as a back entrance for storage or work room or laundry. Another feature is the dining bay off the kitchen which provides an attractive room without demanding much additional floor space. The house shows careful study and a knowledge of practical building problems by Architect Benj. Driesler Jr.



28' x 28'—4 BEDROOMS

TWO exteriors of this little Hillside Heights Colonial are shown. This is one of the lower priced models of Realty Associates, and was designed for maximum economy. With a floor plan less than 28' x 28', four bedrooms have been provided, appealing to the large family.



AN interesting variation in the Colonial design at top of page is shown above. Instead of wide siding, cedar shingles have been used over the lower part of the house. Vertical boards are used in the dormers. These are painted white, and contrast pleasantly with the gray shingles.

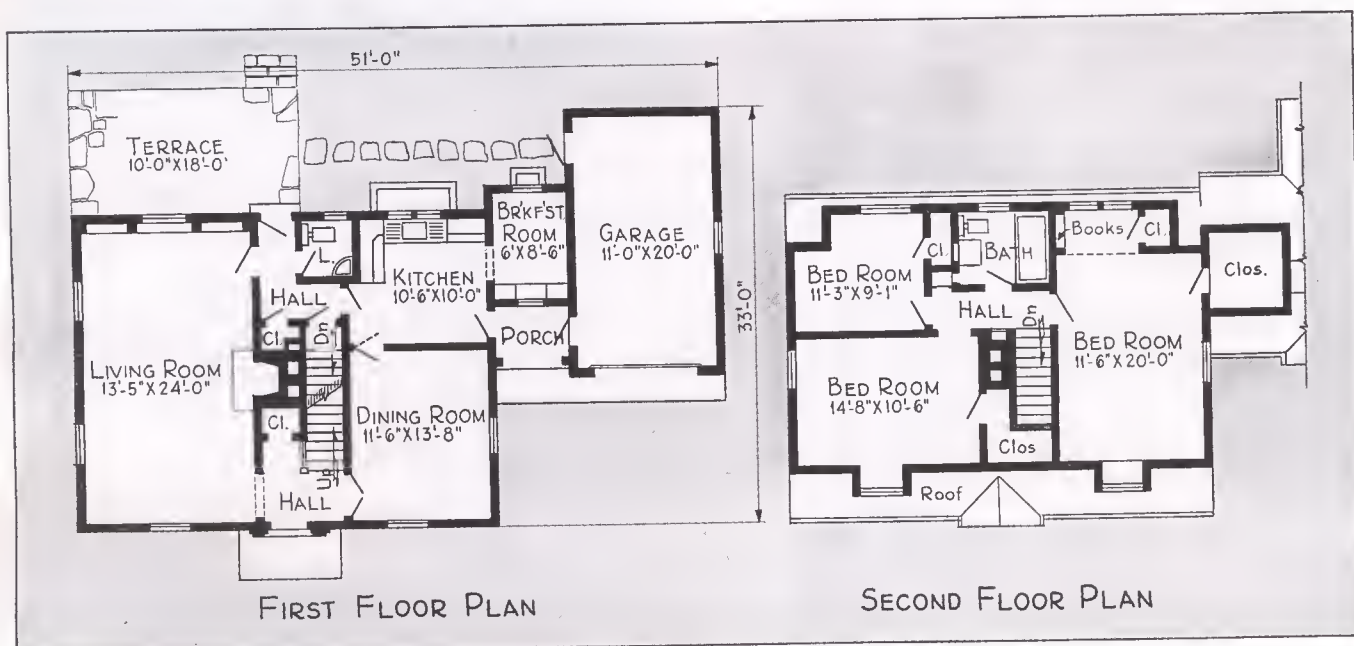
FLOOR plans of this low cost Hillside Heights house have been extensively studied for economical construction.



CAPE COD WITH GOOD PLAN, FINE DETAILING

Located in Glen Ellyn, Illinois
Paul L. Sather, Chicago, Builder
Ralph H. Heth, Chicago, Architect

THIS CHARMING COTTAGE has been planned for both effective use of a natural setting, as shown above, and also for maximum interior convenience, as shown in the plan. There is easy accessibility, a small rear hall connecting basement, kitchen, terrace, lavatory and living room. The breakfast alcove with windows in opposite walls is an especially well planned feature. The three bedrooms have good ventilation and ample closets.





THE GARAGE of this Glen Ellyn cottage is conveniently attached to the house as seen at the left; this wing provides space for the breakfast alcove. Garage door is the Richards-Wilcox folding type.

TO THE LEFT of the front entrance a weatherproof electric outlet is conveniently located for outdoor lighting. Flush lighting panel in head and built-in mail box are included in equipment.

EXTERIOR VIEWS show fine proportions and careful detailing. The front entrance at the right is typically Cape Cod with six panel door and narrow transom; pilasters, cornice, brick steps and flagstones add to the charm of this detail. Service entrance above is very practical as well as attractive. The small covered passageway gives sheltered access to the garage.

WHITE PAINTED wide bevel siding, white shutters and red cedar shingle roof have been used as exterior treatment. The entrance hall has wide plank flooring and the fireplace side of living room is finished in knotty pine. Built-in equipment and cupboards make an attractive and efficient kitchen. The house is heated with a gas-fired winter conditioning unit; basement space is also used for a large recreation room. Concealed lighting in the glass walled bath is unusual. Walls are insulated with U.S.G. Rock Wool and finished on interior with plaster on Rocklath.





\$35 PER MONTH COLONIALS

Dry Wall Construction, Good Colonial Design Featured in New Low-Cost Cottages Built by Blomkvest at Ridgewood, N. J.

ONE of the interesting experiments of the current building season in New Jersey is the low-cost homes being built by Elmer Blomkvest of Model Home Builders, Inc., in Ridgewood, N. J. These little Colonials are 4 rooms and bath, with full basement and large usable attic. The outside dimensions are 28' 6" x 30' and the living room is 15' x 13' 6". Blomkvest sells them, with a down payment of \$1,000, for \$35 a month, which includes all interest, taxes, fire insurance and reduction of principal.

Designed by Architects Eugene A. McMurray and Emil A. Schmidlin of Union, N. J., these little houses have a compact, well-arranged floor plan that represents just about the minimum requirements for a small home. The exteriors

are in Colonial style with good Colonial details, bright red shutters, attractive landscaping and walks.

Blomkvest is using a "dry wall" construction consisting of $\frac{5}{8}$ " Sheetrock gypsum board plaster base, over which wallpaper is laid. The gypsum board is applied in large sheets, with each room carefully laid out so that practically no joints are visible. As a rule the only place a joint occurs is underneath a window. These joints are covered with a special sealer under the wallpaper. The gypsum board plaster base is of the insulating type, having a layer of reflecting foil on the back of it.

Application of trim is simplified by use of the gypsum board, which is square and plumb. A one-piece molded



ONE OF THE BLOMKVEST BUILT Colonial cottages nearing completion at Ridgewood, N. J. This is a 4-room and bath house, with large attic suitable for 2 additional rooms. Floor plan is similar to other houses in group with addition of front porch.

Four-room cottage located in Ridgewood, N. J., is built for small families of moderate circumstances. The Colonial design, with bright red shutters, is very attractive.



base $\frac{3}{4}$ " x $2\frac{3}{4}$ " is used, and all other trim is very simple.

Other features of the house include American Radiator Arco No. 7 one-pipe steel boiler and a "Hydrostat" circulating tank heater. Termite shields are provided around the sills, consisting of a strip of copperclad Sisalkraft laid upon the top of the concrete foundation with a three inch projection on each side folded down.

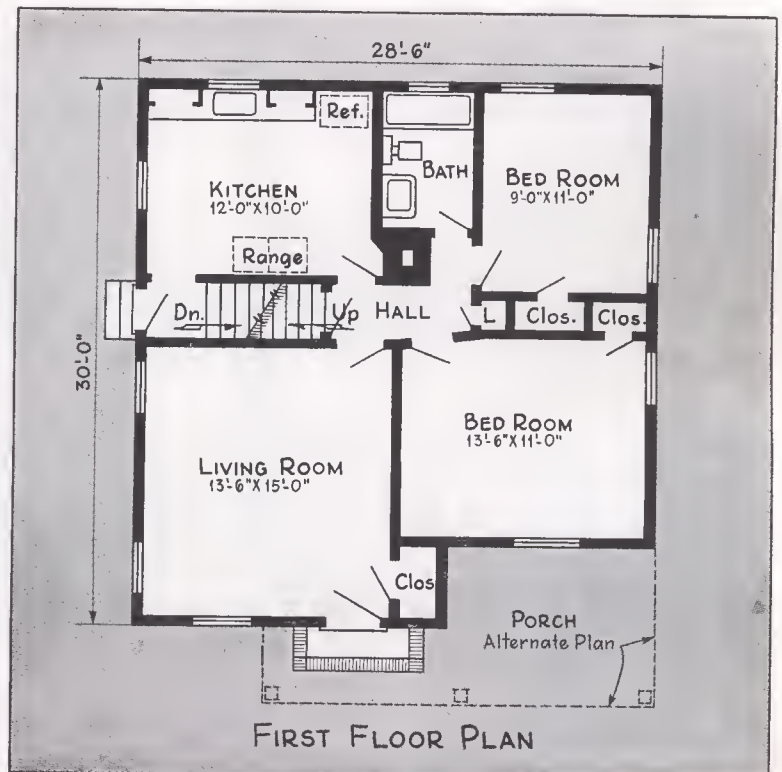
Exterior walls are of Gyplap gypsum board sheathing. Columbia metal medicine cabinets are used and Unique window balance equipment. Colonial doors are Long-Bell King doors. Builder Blomkvist has had a number of successful developments in this territory. His Colonial Gardens was described in AMERICAN BUILDER last year.

This is his first venture into the lower priced brackets.

In advertising these houses, the word "low cost" was avoided. The advertisement states, "these are not to be confused with 'low cost' houses. These are homes of real consequence, designed and constructed to accord with the tastes and standards of Ridgewood people. They are moderate in price only because they are small, not because they are lacking in quality. We recommend them to small families who do not wish to buy a larger residence than they require." The Realty Exchange of Ridgewood acts as exclusive sales agent for Blomkvist, as well as for his Colonial Gardens and Grammercy Park projects.



THE FLOOR PLAN at right, designed by Eugene A. McMurray and Emil A. Schmidlin, architects of Union, N. J., is extremely compact and makes the most of the 28'-6" x 30' floor area. It contains the minimum requirements for the average family. The attic floor is finished, and there is space available for additional bedrooms—an important feature for families of larger size. Blomkvist has built this same plan with the 4 different variations illustrated.



How to Build to Save Fuel

Professor Larson of University of Wisconsin Determines Theoretical Results Based on Nine Construction Combinations

Assists Builders to Answer Home Owner's Queries

*"How much fuel can I save if I insulate my home?"
"Is the investment really worth the cost?"*

These are two questions often asked of the builder and contractor when a home owner is thinking of building or remodeling. The answer that "It all depends" is never wholly satisfying and the failure to produce specific evidence may frequently leave the builder in an embarrassing position, for he knows that the real facts can only be secured as the result of an exhaustive survey and a variety of more or less intricate calculations. It has remained for Professor G. L. Larson, head of the Department of Mechanical Engineering of the University of Wisconsin, to provide a solution to this problem which should be of interest to many builders.

Drawing on the research data in the Guide of the American Society of Heating and Ventilating Engineers, of which he is past-president, Professor Larson calculated the theoretical economic values of nine different combinations of insulation if applied to his own home—a typical

suburban residence of eight rooms in Madison, Wisconsin.

The result of his investigation, illustrated by the table and by the accompanying charts, discloses what a homeowner can reasonably expect in fuel saving, reduction in size and cost of heating plant, return on the investment, length of time necessary to amortize the cost of the insulation and other factors. In fuel saving alone, Professor Larson shows savings ranging from \$9.00 per season to more than half what the fuel bill would be without insulation of any kind.

The data he used were based on a heating season of 260 days. The fuel was oil containing 140,000 B. T. U. per gallon, selling at 7.2 cents. Cost of the hot water heating plant was calculated at \$1.50 per sq. ft. of radiation installed, with a seasonal efficiency of 65 per cent. Cost of applying insulation was figured at 5 cents per square foot, installed, for the ½ inch insulation; 10 cents per sq. ft. for the 4 inch. Weatherstripping was estimated at 20 cents per linear foot, installed; and the storm sash and doors at 25 cents per sq. ft. Interest was charged at the rate of 5% per year; depreciation at 2% on the insulation; 5% on storm sash and doors.

"I hope that this study," said Professor Larson, "will offer a practical yard-stick by which the home owner may evaluate the economic savings from properly insulated homes and that it will encourage scientific building and remodeling for comfort and health. I conducted this investigation because I felt that little or no scientific data of this character was available in simple understandable form."

To the question what type of insulation was used in his calculations and experimental tests, Professor Larson replied: "The figures will apply generally to any good material properly installed."

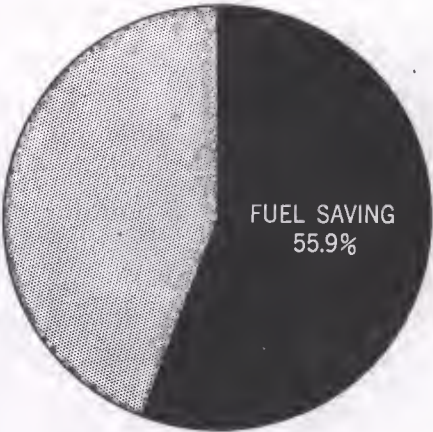
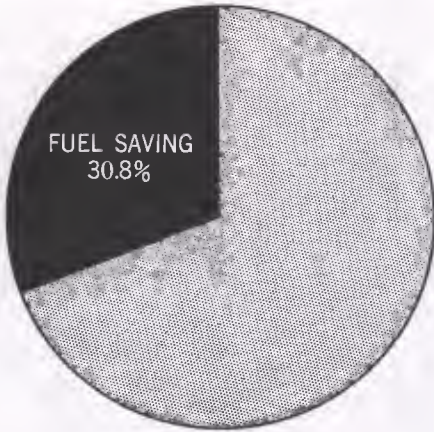
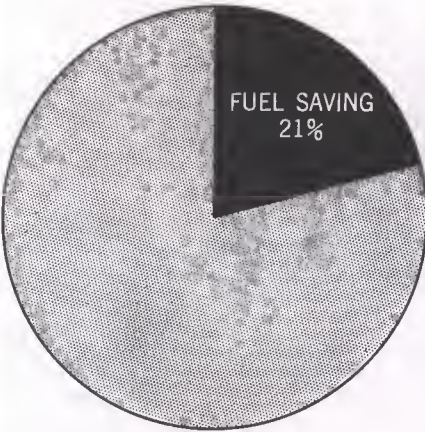


RESIDENCE of Professor G. L. Larson, Madison, Wis., on which novel insulation calculations described in this article were made.

Record of Heat-loss Tests—Nine Types of Construction.

	1—Ordinary house construction without weatherstripping, storm sash, storm doors or insulation.	2—Construction improved by adding half-inch insulation on upper ceiling.	3—Four-inch insulation on upper ceiling.	4—Half-inch insulation on ceiling and walls.	5—Weatherstripping only on all windows and doors.	6—Four-inch insulation on ceiling and walls.	7—Storm sash and storm doors all around.	8—Half-inch insulation on ceiling and walls, plus storm sash and storm doors.	9—Four-inch insulation on ceiling and walls, plus storm sash and storm doors.
	1	2	3	4	5	6	7	8	9
Total Heat Loss.....	159,175	153,871	149,524	139,974	125,741	118,773	110,383	91,182	69,981
Per Cent Saving.....		3.34	6.07	12.1	21.0	25.4	30.8	42.7	55.9
Sq. Ft. H. W. Radiation.....	1060	1025	995	932	837	791	735	608	466
Oil Per Season, Gals.....	3980	3847	3738	3499	3143	2969	2759	2279	1750
Cost of Oil Per Season.....	\$ 286	\$ 277	\$ 269	\$ 252	\$ 226	\$ 214	\$ 198	\$ 164	\$ 126
Saving in Fuel.....		\$ 9	\$ 17	\$ 34	\$ 60	\$ 72	\$ 88	\$ 122	\$ 160
Cost of Construction.....		\$ 51	\$ 102	\$ 142	\$ 129	\$ 284	\$ 106	\$ 248	\$ 390
Interest and Depreciation on Investment.....		\$3.57	\$7.14	\$9.94	\$9.03	\$19.88	\$10.60	\$20.54	\$30.48
Net Saving.....		\$5.43	\$9.86	\$24.06	\$50.97	\$52.12	\$77.40	\$101.46	\$129.52
Per Cent Return on Investment, Net.....		10.6	9.65	16.9	39.5	18.3	73.0	41.0	33.4
Years for Net Fuel Saving to Pay off Investment.....		9.4	10.3	5.9	2.53	5.45	1.37	2.45	3.01
Cost of Heating Plant.....	1590	\$1537	\$1492	\$1398	\$1256	\$1186	\$1102	\$ 912	\$ 699
Reduction in Plant Cost.....		\$ 53	\$ 98	\$ 192	\$ 334	\$ 404	\$ 488	\$ 678	\$ 891

THE NINE numbered columns in the above table represent different combinations of insulation. The house to which these calculations were applied is two stories high, with unfinished attic space. It contains eight rooms and bath above the basement and is of frame and shingle construction with a concrete foundation.



Column 5—in Table—This chart shows what would happen if the house were insulated with weatherstripping only on all windows and doors. Saving in fuel would amount to \$60 per season, or 21%. It would return 39.5% on the investment; pay for itself out of fuel savings in about two and a half years. The cost of the heating plant required would be reduced by \$334 and the heat loss would be cut by 21%.

Column 7—in Table—This chart tells the story if storm sash and storm doors were used all around. The fuel bill would go down \$88 or 30.8%. It would return 73% on the invested cost of the insulation and pay for itself out of fuel savings in about a year and four months. It would reduce the cost of the heating plant by \$488 and lop off 48,792 B.T.U. which represents a reduction in heat loss of 30.8%.

Column 9—in Table—This chart shows the most complete form of insulation—four-inch insulation on ceilings and walls, plus storm doors and sash. The saving in fuel would be \$160 or 55.9%. It would return 33.4% on the investment. The net fuel saving would pay for the investment in a trifle over three years. It would reduce the cost of the heating plant by \$891 and effect a saving of 55.9% or 89,194 B. T. U. in the total heat loss.

Common Sense in Kitchen Planning

JUST a few sound, common sense principles can make a kitchen a big sales asset. Just a few "boners" can spoil it.

In spite of all that has been said and written about better planned kitchens, less than one out of five in new houses last year were done right. Consequently a good many women are pretty bitter toward builders who are "too dumb or stubborn to learn."

Illustrated below are six scientific arrangements produced by a kitchen planning institute that has designed thousands. They will fit practically any average house. Study of these layouts will illustrate some of the common sense principles below.

One of the worst and most common mistakes builders make in kitchens is placing the stove or the sink or the refrigerator by itself without any work space or counter near it. Common sense says that there must be a place for the housewife to put things within easy reach of each of these pieces of equipment. Figure it out this way:

Groceries or supplies are brought in from outside and placed on a counter or work space near the refrigerator. This should be near the outside door. They are put away; then next they are taken over to another table or work counter near the sink to be prepared or cut up and washed. Then they go to the stove, which must have a counter space near it to set things on. They are "prepared for serving" on a table or counter near the dining room door, then go into the dining room. When the dishes are brought out they must be placed on a "cleaning up" space near the sink. When they are washed in the sink the housewife should be able to store them close by.

It is clear from this that a work surface is needed for each piece of equipment. Don't put the refrigerator in a

deep niche, or in another room where it makes the housewife carry things back and forth. Don't put the stove in a distant corner with a door or window on each side so there is not room for a counter to set dishes on.

One of the best and simplest arrangements is the "U"-shaped plan well illustrated in Nos. 1, 3 and 4 below. Doors are grouped so that people passing through do not interfere with work. In each case the stove, sink and refrigerator are located in convenient relation to each other and to the doors. There is continuous counter space between the units, and ample cupboard and storage space above.

A well planned kitchen need not cost any more than a poorly planned one; in fact it can cost less. The kitchen can be cheerful and colorful, but expensive trimming and fancy wood work are not needed. It should be kept simple and easy to clean.

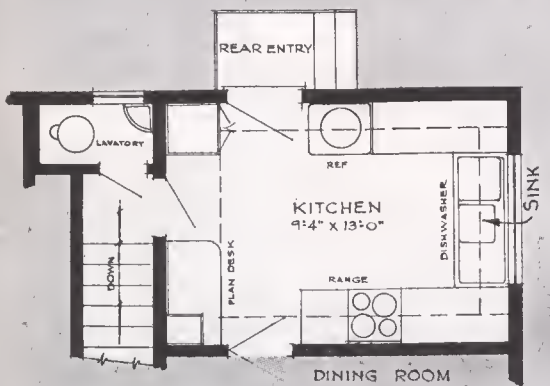
How big should a kitchen be? It varies with the needs of the family. But no matter how big it is, the equipment should be compactly grouped together in one part of it. Then if the owner wants space for a rocking chair for grandpa, or a place to eat, or a place for the dog to sleep or something of the sort he can have it—but these activities or uses should not be mixed up with the working area between the sink, range and refrigerator. Average sizes for kitchens should be about as follows: small kitchen 8' x 9', medium sized 9' 6" x 13', large 10' x 10' to 14'.

SPECIFICATION DETAILS

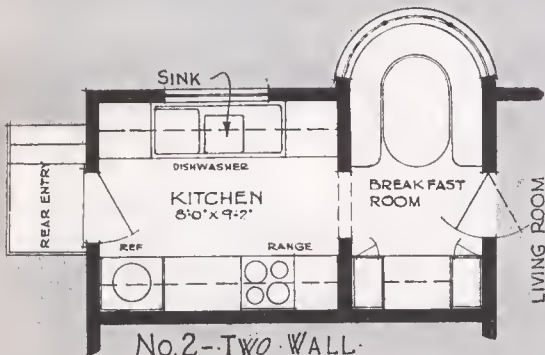
FURRING DOWN CEILINGS—Fur down ceilings above cabinets, (usually about 1', so that wall is flush with face of cabinets.) Soffit may be of wood, plaster or wall-board. It is desirable to extend soffit around entire ceiling area.

WAINSCOTING—Wainscoting should be of clean, washable material such as tile, steel or composition tile or

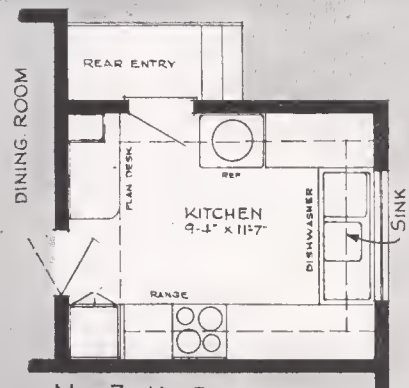
THREE typical planned kitchens laid out in a way that helps the housewife are illustrated below. No. 1 is a "U"-shaped type suitable for the average small house, with sink placed under a window, refrigerator near the door and range opposite. Ample work counters connect these 3 units. Plan No. 2 is for a small two-wall kitchen, and No. 3 is a variation of the "U"-shaped plan to fit a very frequent type of floor plan.



No. 1 - U-SHAPE.
SUITABLE FOR 6 TO 8 ROOM HOUSE



No. 2 - TWO WALL.
SUITABLE FOR 5 ROOM HOUSE



No. 3 - U-SHAPE.
SUITABLE FOR 6 TO 8 ROOM HOUSE



TWO modern, well equipped kitchens, showing ceilings furred down to top of cabinets, good lighting and good arrangement of equipment. Gas kitchen at left; new electric "unit" kitchen at right.

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linoleum. Provide bull nose cap and return at windows.

FLOORS AND BASES—Floor should be of flexible sanitary material, such as linoleum, rubber tile, composition materials. Provide sanitary cove base of floor material, carried into toe space beneath cabinets. Toe space should be 4" high and 3" deep.

WINDOWS—In a small kitchen, 1 window located over sink not less than 3' 4" wide and 3' 4" high is recommended. Window returns should be plaster with metal corner beads. Stool should be of slate, tile, or washable material.

DOORS—Flush panel doors are recommended for the kitchen as they are easiest to keep clean.

PAINTING—Walls, ceilings and trim should be painted with light, cheerful colors in enamels or semi-gloss paints that will resist soiling or steaming and will stand up under frequent cleaning.

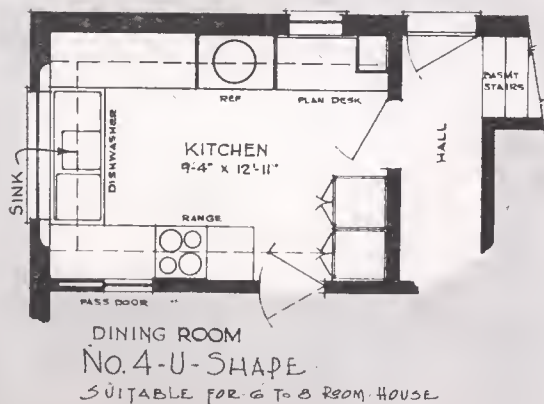
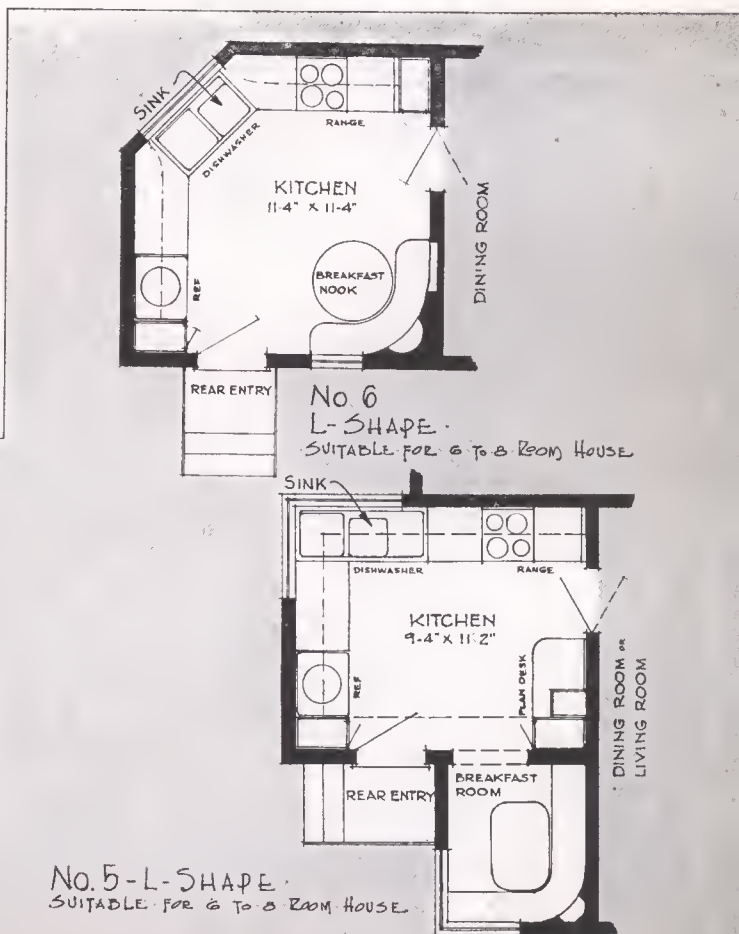
ELECTRIC LIGHTING—Central fixture of 200 watts is recommended, plus a soffit light over the sink and over the range.

ELECTRIC WIRING—Increased electric load on the

kitchen calls for several circuits in addition to the range power circuit. Outlets should be provided for the refrigerator, for the food and the cooking center as well as for a clock, fan and other electrical equipment. A telephone outlet in the kitchen is also recommended as well as call bells from front and rear doors and dining-room buzzer.

CABINETS AND WORK SURFACES—Continuous built-in work tops between the range, refrigerator and sink are recommended. This work area should be of battleship linoleum, tile, monel metal, stainless steel or well oiled hardwood. Height should be 36" from floor.

PLAN No. 4 is a typical 9 by 12 kitchen with 2 doors. Door to dining room is brought close to right wall so as not to break up the work area between range and sink. No. 5 suggests an "L"-shaped arrangement with corner windows. No. 6 also provides an "L"-shaped arrangement of equipment and suggests an attractive circular breakfast nook.

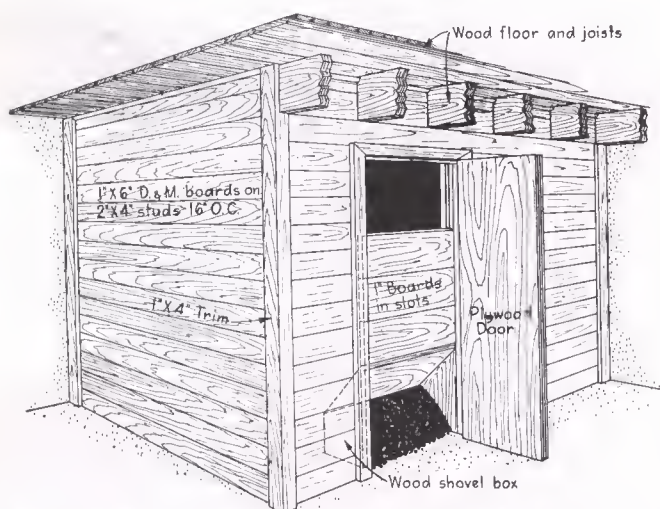


No. 5-L-SHAPE.
SUITABLE FOR 6 TO 8 ROOM HOUSE.

How to Build Modern Coal Bins

Details and Suggestions for Building Enclosed Fuel Bins Suitable for New Houses or for Modernizing Old Ones

PROPER construction of coal bins is stressed in an educational campaign launched by the National Coal Association, nation-wide organization of bituminous coal operators, with offices in Washington, D. C., and Chicago, Illinois. Its purpose is to bring to the attention of contractor-builders the virtues of bituminous coal as a fuel, and to introduce a new service for the building industry. This service provides residential planning suggestions that demonstrate proper location of driveways, coal bins, and coal heating plants for maximum efficiency and economy of operation, together with details and suggestions for building modern enclosed coal bins from various materials.

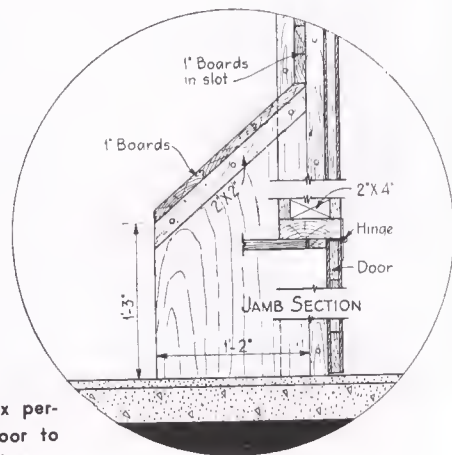


BOTH inside and outside walls of this wood bin are of 1" x 6" D. & M. boards laid horizontally over 2" x 4" studs, 16" O. C.

According to J. P. Williams, Jr., president of the association, it is expected that the new service will prove as popular in its field as is the booklet, "Heat With Bituminous Coal, the Modern Economical Way," issued in June. Four editions of this booklet, totaling 300,000 copies have been called for already, and another edition now is on the press.

Planning suggestions have been collected in a portfolio that includes layouts for both hand-fired and stoker installations. They demonstrate applications of the basic principle of keeping driveway, coal bin, and heating plant as close together as possible. When driveway and bin are separated, coal deliveries may have to be "wheeled" or "toted." Charges for this additional service can be eliminated by proper planning.

Floor plans show various types of bins inside the foundation walls, and others built outside the basement, to provide additional space for recreation or service rooms. The latter bins are filled by gravity, direct from a truck,

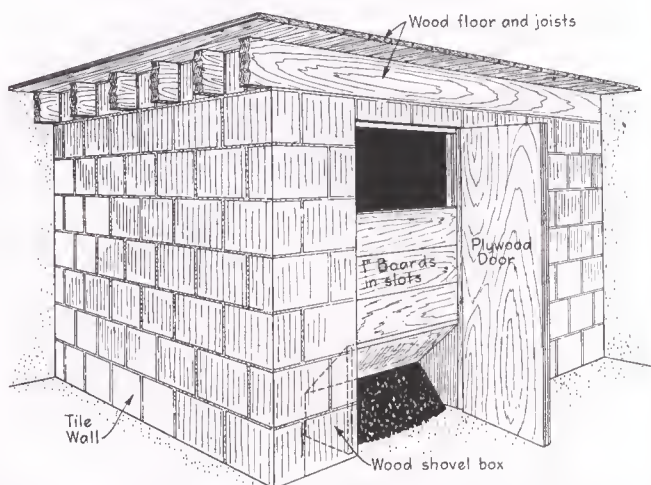


USE of a shovel box permits the coal bin door to be closed at any time.

through a manhole, usually placed in the floor of an attached garage. Built-in coal chutes are recommended for bins that are filled by hand.

Plans also show how heating units can be placed at minimum distance from coal bin doors, and from chimney flues. They show various arrangements of hand-fired coal burning plants, hopper-feed stokers, and a bin-feed stoker with a fuel feed pipe placed below the basement floor level. The bin is built with sloping side walls, so that coal is fed to the stoker as long as there is fuel. Sloping side walls, while desirable, are not essential, as "dead coal" can be used to provide the necessary slope, and also provide a reserve supply in case it is needed.

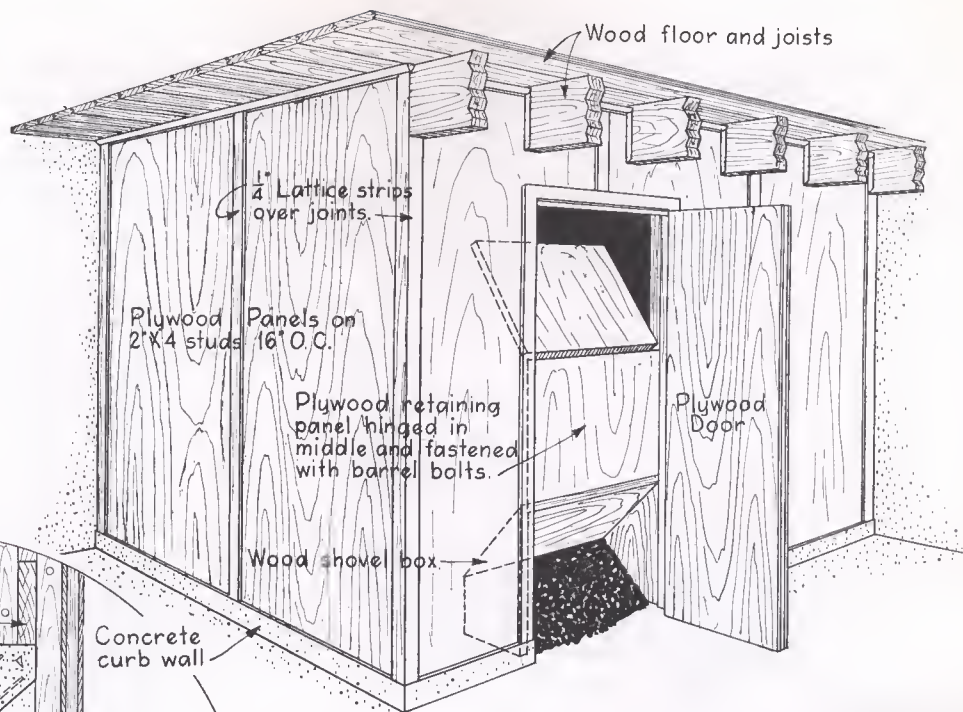
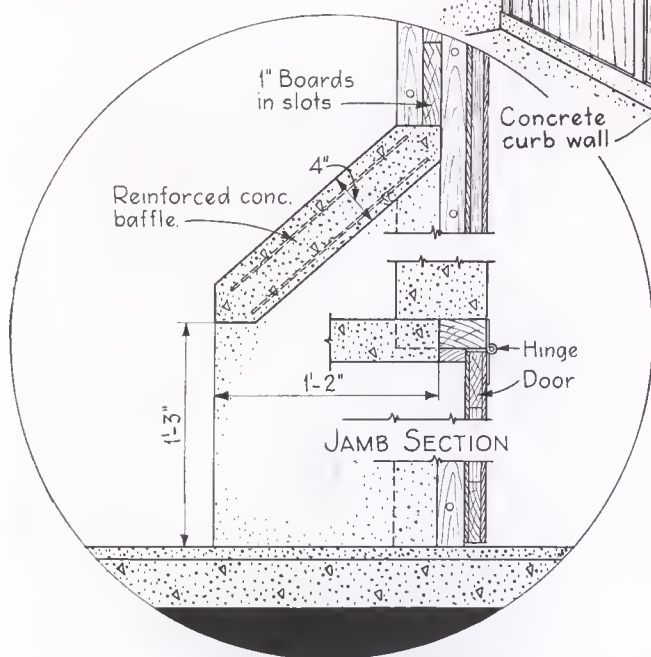
Coal bin details devote considerable attention to access doors, and to various types of retaining panels for the door opening. Bins are equipped with shovel boxes and flush doors. A shovel box can be constructed for any bin. It consists of a sloping baffle set into the door opening, inside the bin. Sides of the box, which is open front and back, rest on the floor. The baffle slopes down from front to back to a point 15 inches above the floor. Coal works into the shovel box opening from inside the bin without



THE bottom course of this hollow tile bin has been imbedded in the concrete floor. The tile can be placed when the floor is finished, or set into a channel.

RIGHT: Plywood bin. The 2" x 4" sill is bolted to a concrete curb wall. Note hinged retaining panel in doorway opening.

BELOW: DETAIL of poured concrete shovel box for concrete bin shown below.



tion, similar to raising the lower end of a wood column on a concrete base above the floor level, keeps moisture out of the lower wall. The inside wall may be lined with $\frac{5}{8}$ " plywood, and the outside wall may be covered with a wall-board grade. Edges of the plywood may be sealed with white lead, applied with a putty knife. The perspective shows side walls slotted at the top so as to make a tight fit with joists. An alternate construction would be to cover the under side of the joists with plywood, joined at the side wall junction with nailing strips. The illustration shows $\frac{1}{4}$ " latic strips applied over outside joints, for appearance sake.

A hollow tile bin is shown with a detail indicating that the bottom course is imbedded $\frac{3}{4}$ " in the concrete floor. The course may be cast into the floor when it is finished, or a 1" board of same width as the tile may be laid on the rough concrete. The board serves as a tile channel, and as a guide to measure thickness of the finish.

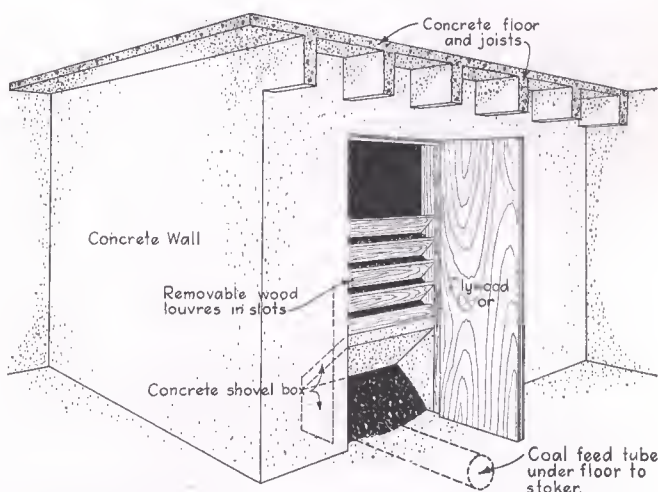
pushing out on to the basement floor. Use of the shovel box permits the bin door to be closed at any time.

Retaining panels for the opening above the shovel box are designed in various ways. The conventional arrangement of 1" boards in vertical slots is shown. One detail shows wood louvres set into slanting slots. Advantages of this method are that louvres can be inserted to the top of the door opening if desired, and that they always reveal how much fuel is in the bin. Another detail shows a plywood retaining panel, hinged in the middle and fastened into the door opening with barrel bolts.

Perspectives illustrate various types of bins. A lumber bin is made with side walls of 1" x 6" D. & M. boards, laid horizontally on 2" x 4" studs, 16" O. C. A 2" x 4" sill is bolted to the floor, and 1" x 4" boards are used for corner trim. Short lengths are fitted between the joists at the top of the bin, and are held in place with nailing strips or quarter round.

A concrete bin is shown with concrete first floor, joists, and poured walls, which may also be made of concrete masonry if desired. The perspective shows a wood door frame and an access door of plywood. A poured concrete shovel box is shown in a separate detail, and a stoker feed tube is indicated below the floor level.

A plywood bin is shown with a 2" x 4" sill bolted to a concrete curb wall $5\frac{1}{2}$ " wide x $3\frac{1}{2}$ " high. This precau-



COAL BIN with poured concrete side walls. Concrete masonry is suggested as an alternate. Note removable wood louvres in the doorway opening, used as a retaining panel.

SHOPCRAFTER'S Corner

Things To Build for Profit or Pleasure

How to Build Double Bunks

MANY summer homes and lakeside cottages either have already been completed this year or are in the last stages of construction. The next step is to furnish and equip these vacation homes and one of the major problems is that of providing sufficient sleeping accommodations.

One of the simplest and most popular types of bed for the camp or cottage is the double bunk because of the space-saving feature and the added charm of rustic appearance. If built similar to those on this page, the cost is quite small.

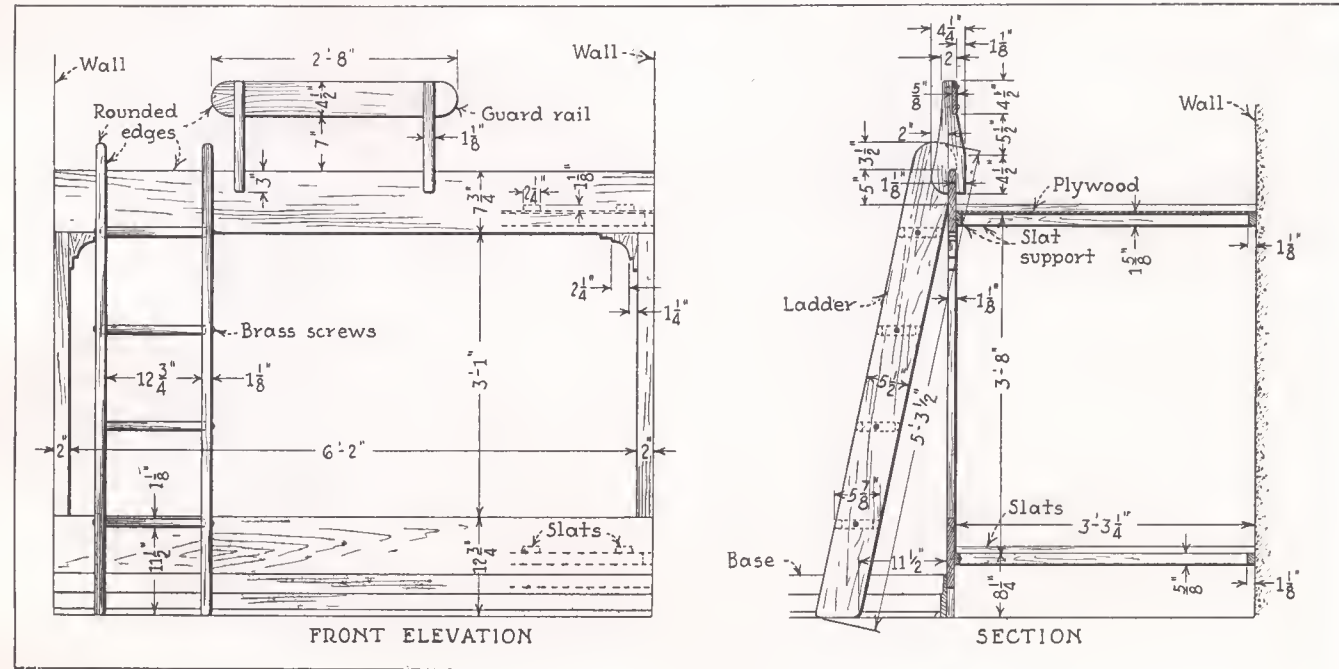
As seen in the illustration, one end of a small room 6½ feet wide was ideal for this purpose. A corner post and end rails will be needed where the walls do not form the ends of the bunks.

The guard rail and ladder should be removable to allow easier bedmaking. Rounded corners and a natural finish on the stock, which can be pine, maple, redwood, etc., add to the rustic appearance. A plywood panel under upper bunk acts as a dust stop and conceals springs from below.

BILL OF MATERIAL

- 2 pcs, Front Rails, 1½" x 7¾" x 6'-6"
- 2 pcs, Side Supports, 1½" x 2" x 3'-1"
- 2 pcs, Corner Brackets, 1½" x 5" x 5"
- 3 pcs, Slat Supports, 1½" x 15½" x 6'-6"
- 14 pcs, Slats, 1½" x 2¼" x 3'-3¼"
- 1 pc, ¼" Plywood Bottom, 3'-3¼" x 6'-6"
- 2 pcs, Ladder Rails, 1½" x 5½" x 5'-3½"
- 4 pcs, Ladder Steps, 1½" x 5½" x 13¾"
- 2 pcs, Guard Brackets, 1½" x 4¼" x 1'-3"
- 1 pc, Guard Rail, 5½" x 4½" x 2'-8"

RIGHT: View looking into bunkroom shows arrangement of built-in sleeping quarters. Construction is detailed below. Bunks were designed by E. L. Danielson of American Builder staff, and built into his lakeside year 'round home.



"ACCURACY always" is the motto of this electric saw seen in operation in the new 103-home project of Levitt & Sons in Westchester County, N. Y. Practically all lumber for the job is cut here.



Photos by John Gass

"HEADWORK" QUALITY

A Camera Study of the Construction Methods of One of the Nation's Most Successful Builders. How Levitt & Sons Achieve Quality by Forethought and Through Study of Modern Materials

WHEN the *American Builder* editor and cameraman visited Levitt and Sons new 103-home development near Scarsdale, N. Y., some twenty houses were in various stages of construction. It was possible to get a quick birdseye view of the Levitt construction methods from foundations to roofs.

This new Levitt development marks the entrance of a most successful Long Island builder into exclusive Westchester County. Houses being built range in price from \$8,000 to \$16,000, on plots 60 to 100 feet wide. There is talk among the building crew of finishing the 103 houses by midsummer, and the rate of activity indicates that this may be possible.

One of the first things noted was a centrally located DeWalt Woodworker on which the bulk of the joists, rafters, bridging and framing for the job is cut. General superintendent Anthony Baker has prepared a chart of a typical house on which he indicates the principal framing members by letters—AA, BB, etc. It is a matter of a few minutes only to estimate the number of each type of member required for a typical house. These are cut accurately and squarely on the power saw and delivered to the carpenters ready for nailing in place.

About 100 men are employed in this Scarsdale development which has been given the title "Strathmore in Westchester." The assistant superintendent is Fred Callfield. These two men, with two carpenter foremen, run the entire job, which is, like all of Westchester County, 100 percent union.

Much has been written about the smartness and style of Levitt-built homes. The Levitt developments have been uncommonly successful. In addition, the firm uses and features prominently nationally advertised products, such as General Electric oil and gas furnaces, American



Every 4th Joist Doubled—

STANDARD LEVITT CONSTRUCTION procedure includes diagonal sheathing and flooring and No. 1 lumber throughout. The 2 x 8 second floor joists are doubled at every fourth member. Second floor bridging is power cut 2 x 3's of No. 1 spruce. A 3 x 10 solid header is seen over the arch, and doubled 2 x 6's over the door opening. Framing members fit square and true because they were cut on a power saw.

Radiator radiant convectors, Johns-Manville insulation, Fenestra steel casements, Armstrong linoleum, Bangor slate roofs, Standard plumbing fixtures, etc.

But what about the *hidden* construction features? It is the purpose of this article to describe these methods, and the accompanying photographs, taken at random and indicating typical operations, speak for themselves.

Levitt and Sons do not always use the most *expensive* materials. But it is apparent that they put quality products where they are most needed and will do the most good. They achieve quality also by headwork—by studying the characteristics of new materials and using them in the most efficient way. A small “research laboratory” has been set up to devise better methods and materials. In addition, a wealth of practical experience has been built up by construction men

well grounded in the field and who have been with the firm many years. Following are highlights of the Levitt construction practices:

FOUNDATION AND JOISTS—High quality, watertight, solid concrete foundations are achieved using steel forms. First floor joists are of No. 1 3 x 8's on 16-in. centers. These are supported by steel I-beams supported by lally columns. A 2 x 6 plate is placed on the I-beam to equalize shrinkage.

BRIDGING IS UNUSUAL—It consists of 3 x 8 blocks cut at a slight angle on the power saw and fitted tightly between joists. These are, of course, not nailed up tight until the job is completely finished. A desirable feature of this type of bridging is that the blocks can be further tightened by the home owner with a few blows of the hammer at any time during the life of the



Efficient Radiators—

New type radiant convector radiators which provide maximum heating efficiency are recessed in wall. One-half inch gypsum board with a metal foil face is nailed to wall behind radiator. Front is exposed as shown. Simple wood mould is nailed to grounds around radiator.

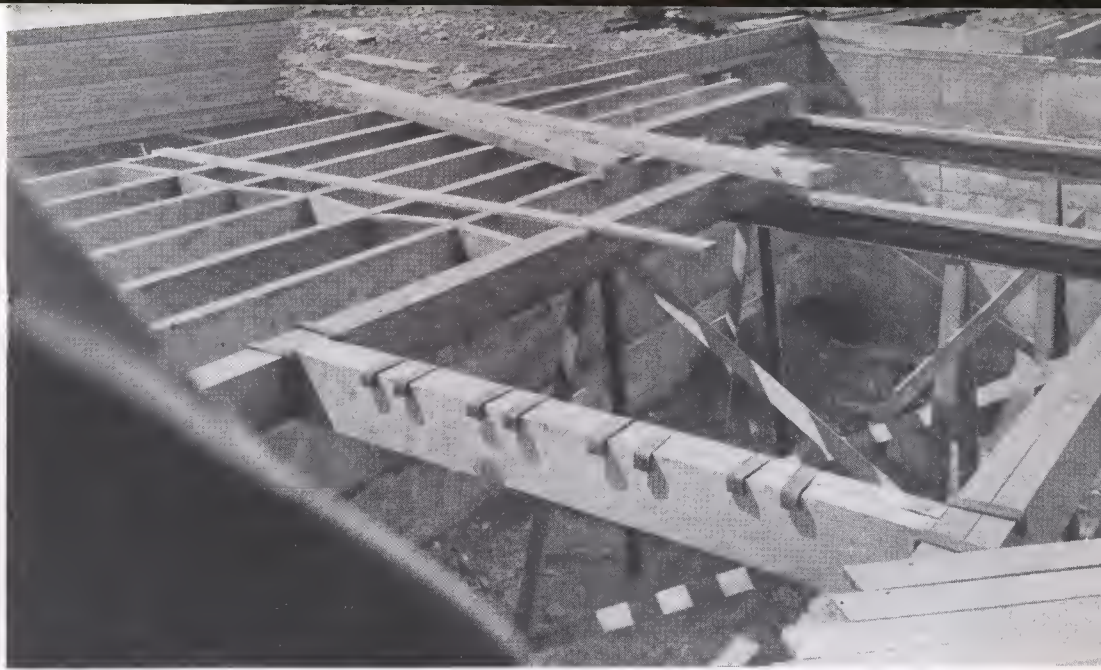


Tight Flashing—

Heavy copper flashing is used at all junctions. Note how the above cap flashing has been built up 4 inches above slate so snow cannot back up behind. The 24-lb. building paper is brought well down, carefully lapped and nailed.

3 x 8 Joists—

The Levitt foundations are of high quality solid concrete over which are laid No. 1 quality 3 x 8 floor joists. These are supported in the middle by steel I-beams upon which a 2 x 6 is placed to equalize shrinkage. The bridging is 3 x 8 inch blocks cut on a power saw and placed at a slight angle to provide the maximum bracing effect. Bridging of this type can be easily and quickly tightened with a few hammer blows at any time in the life of the house.



Fire Cuts—

The camera shows in the picture at right how fire cuts have been made along the first floor where a brick wall is to be erected. In the foreground is also shown the half-lap joint of floor plate at the corner. Note the square-cut studding which were all precut on a centrally located power saw. The 1 by 4 flooring is merely tacked in place at first to allow for swelling and shrinkage until after plaster coat has dried. Boards are then tightly nailed, 3 nails to a board.



Air-Tight, Water-Tight Steel Windows—

Three steps in producing tight steel windows are shown below. A Strip of Sisalkraft building paper is wedged into frame along with mastic before window is placed in opening. The 24-lb. felt building paper is brought up close to edge of window and a layer of black mastic smeared on, as indicated in picture at left below. The Sisalkraft is then lapped over the mastic and felt and tacked in place. The final step, metal lath is brought close to frame and thoroughly nailed.

Photos by John





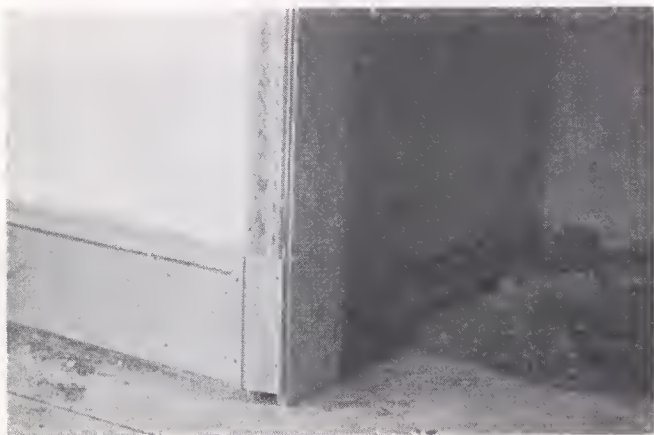
Non-Shrinking Header

The header over this bay window is built of two 2 x 8's between which is bolted a 1/2-in x 8 steel flitch plate. The plaster head is furred out to allow for shrinkage. The photo also shows use of insulating lath on exterior walls and perforated gypsum board on interior walls and ceiling. Full corner beads placed square and true have been set in place. Picture also shows how exterior building paper has been brought up inside window frame at bottom and tacked.



Waterproof Deck—

This second-story roof deck has a strip of copper flashing all around edge. Corner posts are set in mastic and copper flashed before being boxed.



No Floor Cracks—

A 1 x 4 ground insures smooth plaster. Base is nailed to this ground board. Flooring projects underneath baseboard so that no crack will be revealed by shrinkage. Base shoe is nailed to baseboard clear through to ground so that floor can move independent of shoe or base.

house. Second floor bridging is of 2-in. by 3-in. No. 1 spruce.

ROUGH FLOOR—Rough flooring is No. 1 four-inch boards laid diagonally. Flooring is merely tacked in place at first so that it can swell and shrink as necessary during construction of house. Just before finished floors are laid the rough flooring is tightly nailed with three nails to the board at every bearing point.

FRAMING AND SHEATHING—All lumber is No. 1 quality. Sheathing is laid diagonally. Second floor joists are 2 x 8's with every fourth member doubled. Headers over archways and doors are extra heavy—for example, two 2 x 6's over a 30-in. opening.

Headers carrying second story load such as over a bay window are built up of two 2 x 8's with a 1/2-in. by 8-in. steel flitch plate bolted between to eliminate sag or spring.

BATHROOM FLOORS—Levitt believes the usual 4-in. concrete deafening is an unnecessary load and
(Continued to page 93)



Copper Window Pan

Levitt places a copper pan at base of window under finished sill. This carries off any condensation to outside of exterior wall.

50% More Outlets in 1938 House

Today's Wiring Standards Much Higher Than 1927 to Accommodate Increased Electric Service. Unit Costs Are Down—but Quality is Up.

By **ROBERTA YEATON,**

Adequate Wiring Bureau

THE popular question, "Why aren't building costs lower?" ignores the intrinsic values of the *rising standard* of building construction.

An important distinction lies between price levels and the "high cost of building." The point is that most equipment prices actually are lower and through volume production are constantly reducing—but higher standards of construction tend to pull total home costs in the opposite direction.

As better materials and equipment have gained wider distribution, the resulting reduction of prices has made improved building possible without adding to the whole cost of construction. The present high standard of livability, durability and good taste in average dwellings was available only in homes in the higher brackets as recently as 1927. Without consistent price adjustments, as improvements have increased, today's \$8,500 house would no doubt cost 20% more—and be worth it, in comparison to houses built for \$8,500 ten years ago.

The new and higher standard of adequacy for electrical installations notably emphasizes the dramatic progress of the American home. The nationwide popularity of the convenience of electrical service for a multitude of home uses has, in an astonishingly brief period, immeasurably changed and raised the nation's standard of living. If unit prices had not reduced, as demand for more and more

elaborate installations increased, this advance would not have taken place.

In the average \$8,500 home ten years ago, for instance, a wiring system of branch circuits of No. 14 wire, to no more than 40 outlets for lighting, switches and appliances, was completely adequate. Today, the minimum outlet requirements for a similar residence would total no less than 65 outlets, more branch circuits of No. 14 wire would be needed and larger wire mandatory to certain appliance outlets. If present wiring were installed at the prices which prevailed ten years ago, the cost would be 20% to 25% higher.

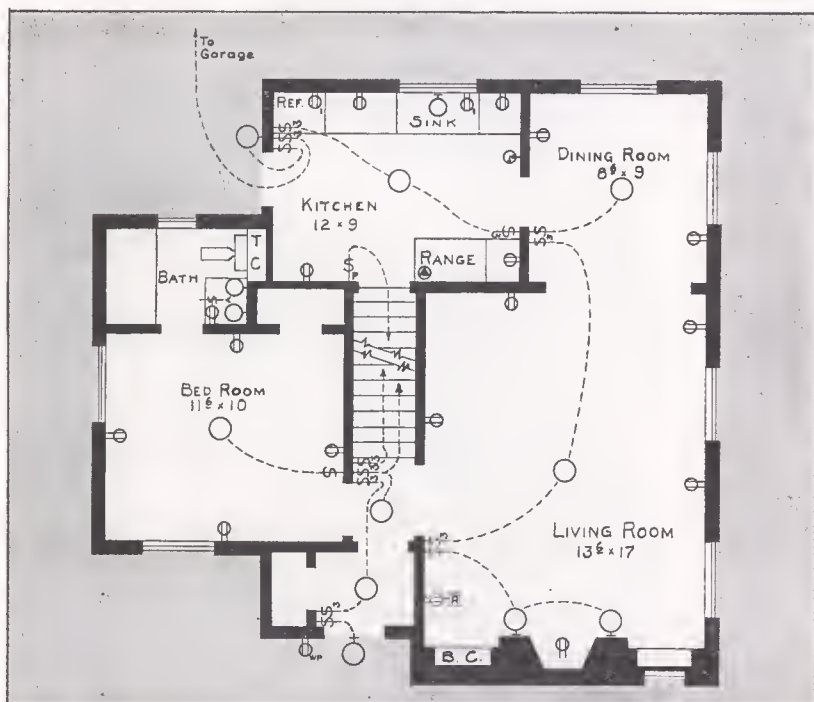
The figures tell the story. On September 1, 1937, No. 14 two-wire armored conductor, commonly used for circuit wiring in residences, was listed at \$3.60 less per 100 feet than the listing of September 1, 1927. The present higher standard which demands more wire per house is naturally more readily employed at the new price level.

The same condition holds in respect to the demand for more and better switches, convenience outlets and lighting equipment. The old tumbler and push button five-ampere switches, used in standard practice in 1927, cost 45c with plate. Today ten-ampere bakelite toggle switches are the standard and cost 42c with plate—a better looking, more serviceable switch at a lower price.

Similarly, the old style single convenience outlet with brass plate cost 47c in 1927; the new duplex convenience outlets of improved types, with plates of various compositions, cost 31½c—double quality and quantity at 33% less.

Other items on the cost sheet compare as favorably. In 1927 the pendant type lamp socket was assembled from parts at a cost of 50c. Now an improved durable assembled socket serves the same purpose at 37c.

The fact that prices of building equipment have adjusted all along the line is particularly important in respect to wiring installations. So rapidly have the home uses of electrical power multiplied that residential service has completely changed character in less than the length of a



UNIT COSTS DOWN

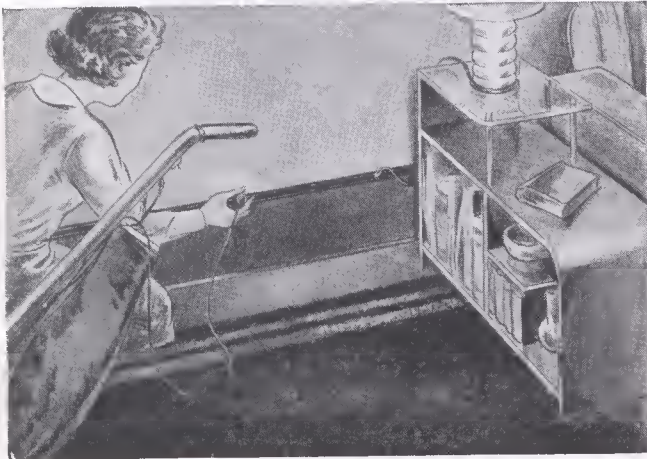
	1938	1927
Armored Conductor No. 14-2	\$22.90 (per 100 ft.)	\$26.50 (per 100 ft.)
Switches	42c (10-amp.)	45c (5-amp.)
Lamp Socket	37c (assembled)	50c (unassembled)
Outlets	31½c duplex	17c single

SYMBOLS

- CEILING OUTLET
- WALL OUTLET
- ⊙ CLOCK OUTLET
- ⊕ DUPLEX CONVENIENCE OUTLET
- ⊖ SINGLE CONVENIENCE OUTLET
- ⊗ WEATHERPROOF CONVENIENCE OUTLET
- ⊘ SWITCH AND CONVENIENCE OUTLET
- ⊙ RADIO AND CONVENIENCE OUTLET
- ⊕ RANGE OUTLET
- \$ SINGLE POLE SWITCH
- ⊕ 3-WAY SWITCH
- ⊙ SWITCH AND PILOT LIGHT

TYPICAL wiring layout of a small home illustrating the 1938 standard of adequate wiring for electrical convenience. This is the minimum number of outlets for up-to-date electric service based on the electrical industry's handbook of interior wiring design.

decade. Electric lighting has been supplemented by every kind of electrical convenience. It has become important to avoid the liability of electrical obsolescence in new homes. Convenient outlets and adequate conductors must be provided to accommodate the array of electrical appliances every householder owns today. Room for electrical expansion, after the service has been installed, is just as important. One survey uncovered the fact that each wired household in its area averaged three new appliances purchased each year. With the quickening demand for higher wattage, irons, toasters, heaters, larger capacity refrigerators, and with the new popularity of electric ranges, dishwasher sinks, water heaters and other heavy duty equipment in kitchen, laundry and dining room, power supply is an important factor.



ONE WAY to be sure of having a convenient place, no matter where you are, to plug in an electric fixture is to install this new plug-in strip. Less than one inch square, it is installed flush in plaster walls on top of or inserted in baseboard, providing an outlet every 6 or 18 inches along its length.

The trend toward lighting with portable lamps, cove lighting and built-in units emphasizes the necessity for up-to-date lighting installations. It is not unusual to see four portable lamps of different types in use in a living room such as the floor plan illustrates. Larger living rooms are often furnished with five or six, both for reading lamps and for decorative purposes. Owners of typical \$8,500 homes such as this one have also become accustomed to more than one radio, and are even beginning to add radios to kitchen equipment. This one change alone demands additional outlets and special wiring, both for satisfactory reception and for the sake of sightliness.

New Standards of Wiring Adequacy

Accurate averages of electrical consumption have been computed from national surveys conducted over a period of years and brought up to date with the cooperation of the several branches of the electrical industry.

Averages computed according to sizes of dwellings are rated in simple tables which define service entrance requirements, outlet requirements, and the number of branch circuits required for lighting and for appliance operation. All requirements are based on the size of the dwelling and the recorded average uses and total consumption of electrical power in such dwellings. The rate of acceleration of increase of the householders' use of electricity is also computed and minimum provision for normal expansion is accurately indicated.

All of this information is available in the Handbook of Interior Wiring Design recently compiled by a committee of distinguished representatives of the electrical world from impartial inclusive surveys of collected fact. The

standard establishes minimum adequacy. In no respect does it surpass present averages and the recorded trend. It is the standard which offers the American builder a sure means to a long-time postponement of electrical obsolescence in this, the "electrical era."

Major Requirements:

All services shall be three-wire. The gauge of the wire and the rating of the service equipment must be determined according to the floor area of the finished rooms of the dwelling.

Appliance branch circuits of No. 12 wire should supply convenience outlets in kitchen, laundry, dining room and pantry.

Special purpose circuits are required for certain fixed heavy-duty appliances.

Branch circuits of No. 14 wire, to supply lighting outlets and all other convenience outlets, should be provided according to the floor area of the finished rooms of the house—one branch circuit for each 500 square feet of floor area. Outlets supplied by these circuits should be divided as equally as possible among all such circuits.

Modern standards of interior finish render it desirable to provide for the concealment of telephone and radio wiring when the house is built.

Convenience outlets should be of the duplex or other multiple type. Exceptions are the placing of a special outlet for a wall or mantel clock, a ventilator, refrigerator or other special unit.

The main lighting unit of each room, at least, should be controlled by a wall switch on the lock side of the door near the door frame. Three-way switches are needed if the room has two or more commonly used doorways, separated by a distance of 10 feet or more.

Bracket lamps are required for supplementary lighting at work centers in kitchen, pantry and laundry. Convenience outlets should be installed in these locations, at convenient height.

Convenience outlets should be installed:

In each 20 feet of hallway (or major fraction thereof).

For buffet and table use in dining room and dinette.

In bathrooms, near mirror and *away from tub*.

One in attic and in basement.



NO MORE OF THIS—The modern home must provide for enough convenient places to plug in electrical devices and equipment without such accumulation of dangling, dangerous wires seen above.

Weatherproof type outdoors, near entrance, and along each 15 feet of wall (or major fraction thereof) on covered porches, terraces and patios.

The following rule for convenience outlets applies to living rooms, libraries, sun room, reception halls, recreation rooms, bedrooms: No point along the floor line in any wall space, unbroken by a doorway, should be more than 6 ft. from an outlet in that space; also, at least one outlet in each usable wall space 3 ft. or more in length at the floor line.

Special problems in the lighting of closets, hallways, garages, entrances, attics, basements and bathrooms are solved in the Handbook in terms of minimum adequacy. General rules for lighting the active rooms of the house are included.

Lighting, convenience and switch outlets for each room are indicated so that a minimum installation may be planned for maximum service, according to the size of the house.

The floor plan illustrated presents a typical application of the new standard.

Comparison of Typical Installations

Two six-room houses with detached garages, built in the same locality for \$8,500 each, were recently compared in a wiring survey. One house was built in 1927, the other in 1937. Wiring, total outlets and total cost were checked. The result is interesting and clearly demonstrates how wiring has improved as prices have lowered.

The cost of each installation is almost the same, per outlet, with the advantage slightly in favor of the 1938 layout. Greater value for the dollar is found in the superiority of the wiring itself. The 1938 installation provides more than 70% more service at a little less than 50% more cost. The inclusion of radio wiring and spe-

cial circuits to range and refrigerator necessitates service equipment of a higher rating than the 1927 layout required. Better wiring for power adequacy is provided at no additional cost per outlet.

	1927 House	1938 House
No. of Ceiling Outlets	14	17
Bracket Outlets	3	4
1-Way Switches	11	13
3-Way Switches	2	6
Convenience Outlets	10	16
Special Outlets	2	9*
Total Outlets	42	65
Cost of Installation	\$75.00	\$115.00

*includes outlets for range, refrigerator and radio

"Headwork" Quality

(Continued from page 90)

has eliminated it. The bathrooms are floored over the same as other rooms. Over the rough flooring is placed 1/4-in. fir plywood. A layer of 24-lb. asphalted paper is then put down, and upon this is laid heavy wire lath. This forms the base for a 1/2-in. layer of waterproof cement mortar in which the tile floor is laid. The surface of the tile floor is slightly higher than the other rooms but not objectionably so. This floor construction have been thoroughly tested and has been found more efficient and satisfactory, according to Levitt engineers, than the older methods.

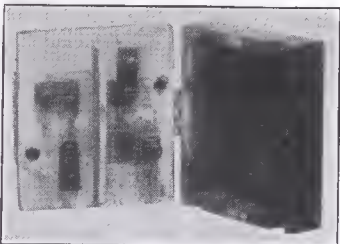
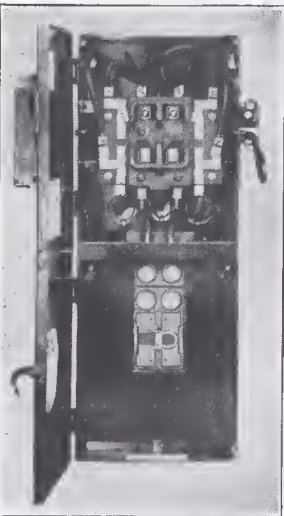
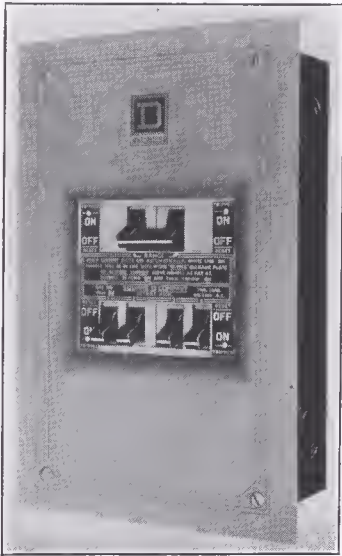
LINOLEUM FLOORS—Where linoleum is laid in kitchens, dining rooms, halls, etc., a 1/4-in. layer of fir plywood is put down over the rough floor. Heavy felt linoleum base is cemented upon this and the linoleum cemented in place according to the best standard practice. The plywood provides a highly desirable smooth base for the linoleum.

BUILDING PAPER—The Levitt construction men believe that building paper is no place to economize. They make generous use of 25-lb. Carey asphalt-saturated felt. Around window and door openings and in other places Sisalkraft is extensively used. The 24-lb. felt is generously lapped and tightly tacked. To some observers the use of this building paper appears almost wasteful—wide laps at joints—extensive doubling in dormers and around projections and corners and extensive lapping. Great care is taken in the way the felt is tacked around openings, and it is evident that much importance is attached to proper use of building paper to keep out cold, wind and moisture.

TIGHT WINDOWS—Levitt has made an intensive study of steel windows and claims to have solved all problems of leakage. Wood surrounds are screwed to the steel frames and imbedded in special mastic. At the same time that the surround is imbedded in the mastic, a 6-in. strip of Sisalkraft building paper is inserted. When the steel windows with wood surrounds and projecting sheets of paper have been nailed in place, a black waterproof mastic, made by the Barrett Company, is generously applied at the junction of the surround and over the sheathing. The asphalt felt is then nailed down upon the mastic and the strip of Sisalkraft folded over on top of the asphalt paper and also nailed. This provides a triple-sealed window. In addition, a copper pan is set in at the base of the window under the finished sill, which catches any condensation that may form inside the window and carries it to outside of the exterior wall.

1937 STYLE—fuses are eliminated—fire and shock proof, compact—only 11" x 6 1/2", good looking. When lights go out, just flip a lever to restore circuit.

OLD STYLE—entrance and range switch were unsightly, large, dangerous to change fuses. At right below—early form of fuse block.

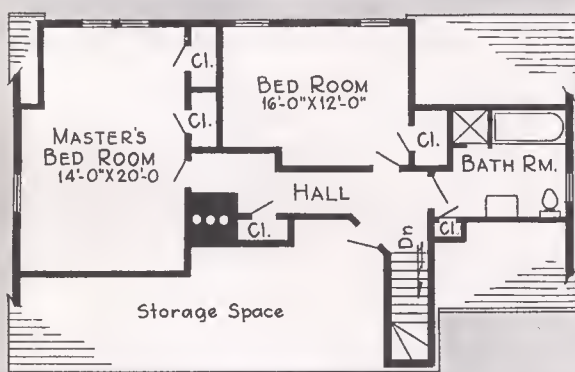




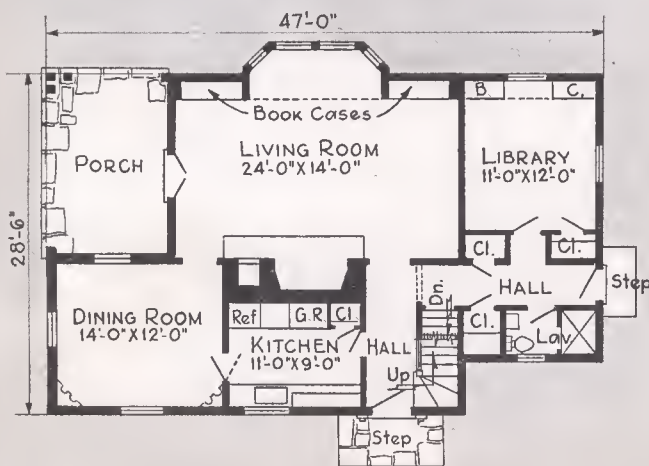
SIX-ROOM CAPE COD—KITCHEN AT FRONT

Cy Williams, Builder

Arthur H. Esbig, Architect



SECOND FLOOR PLAN



FIRST FLOOR PLAN

THE EXTERIOR of this Westbury, L. I., home has real Cape Cod charm, but at the same time the house has a modern arrangement of the interior that is unusual and interesting. The kitchen and dining room are placed at the front, and the large living room, porch and library face away from the street overlooking a quiet garden. There are good and bad features to this arrangement. One of the bad is the difficulty of disposing of kitchen waste. The kitchen itself is beautifully finished and very attractive.

THE INTERIORS of the house reflect Colonial charm, with a huge brick fireplace and a low-beamed ceiling in the living room. Concealed radiators supplied by a hot-water system are used. Exterior walls are of hand-split shingles, and a 2-car garage built to resemble a Colonial barn or woodshed is covered with the same product. A novel feature of this garage is the 1-piece overhead doors, with large shuttered windows built in to maintain the Colonial atmosphere of the structure.



A MODERN, well equipped kitchen, flagstone floored hall and beautiful beamed-ceiling living room are attractive features of the Westbury, L. I., Cape Cod designed by Arthur H. Esbig.

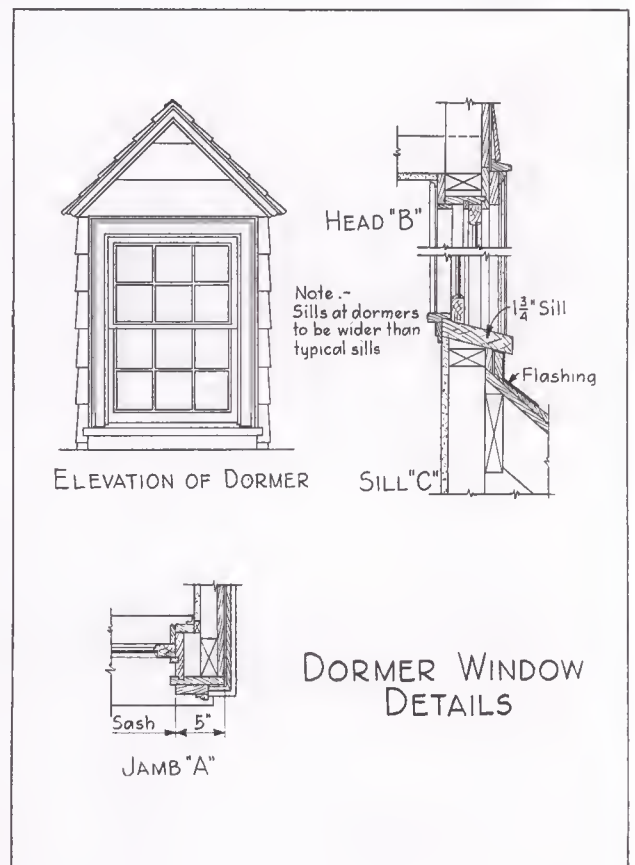
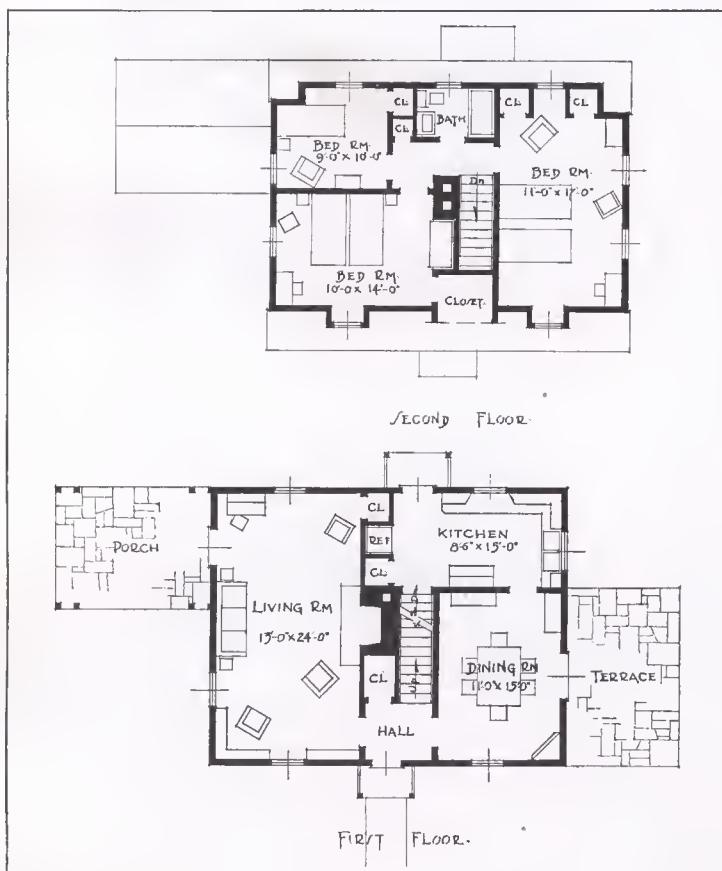




NORWALK MODEL HOME—6 ROOM COLONIAL

William J. Harrison, Builder; Alfred W. Grant Architect

THIS WELL-PROPORTIONED little Colonial house was opened as a model home this year in Norwalk, Conn., featuring up-to-date materials and equipment including winter air conditioning. There is a good sized living room 13 by 24 feet, which has French doors leading to an open porch. There are 3 bedrooms and bath. The latticed entrance detail is unusual and attractive.



SPECIFICATIONS FOR NORWALK MODEL HOME

AIR CONDITIONING—Dail Steel Products Co. Dailaire winter air conditioner, with humidifier, filters, thermostatic control. Delco oil burner.

INSULATION— $3\frac{5}{8}$ " Rockwool, Metal weatherstripping and brass saddles on all exterior doors.

MILLWORK—Morgan Colonial doors and interior trim. Morgan kitchen cabinets.

HARDWARE—Colonial hardware by Norwalk Hardware Co.

WALLPAPER—Richard E. Thibaut, Inc., N. Y.

SEPTIC TANK—Nustone Products Co.

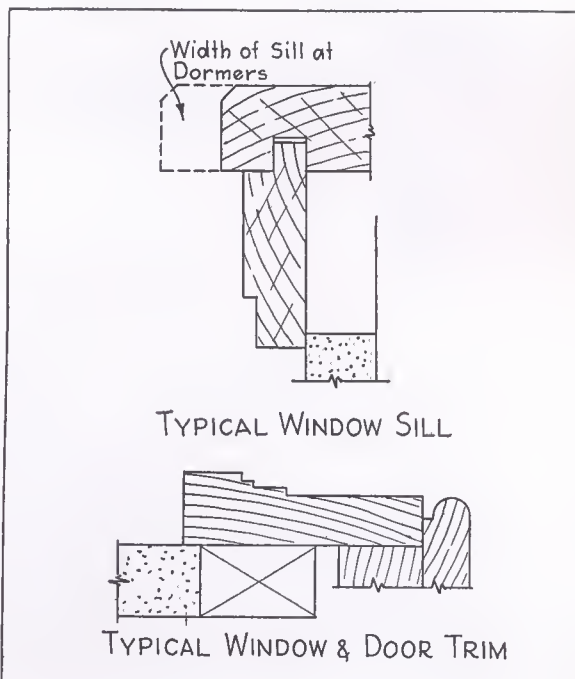
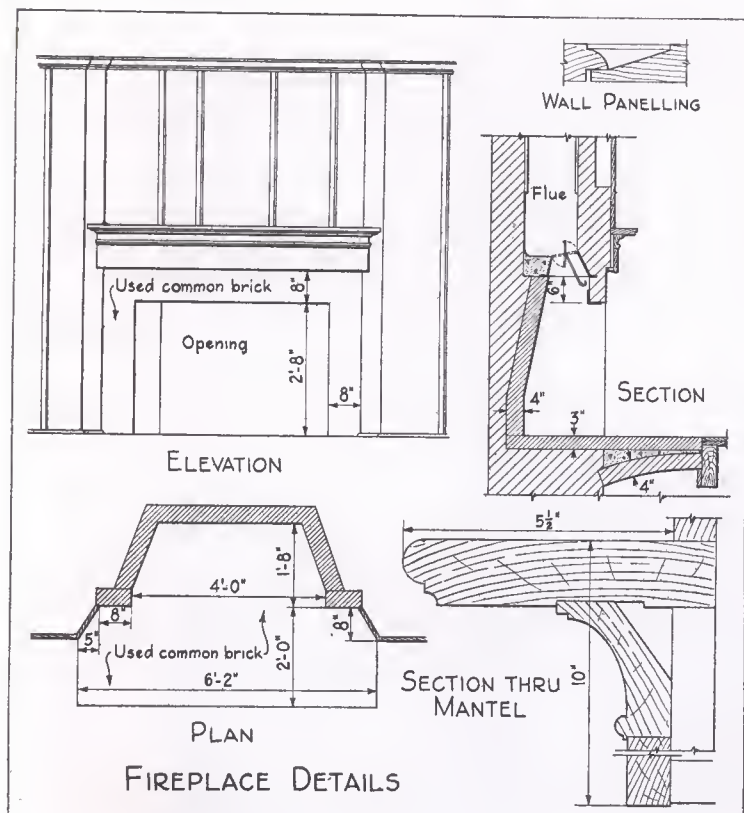
PAINTING—Kitchen and bathroom 3 coats Devco & Reynolds oil paint. Other rooms Muresco. Exterior walls 2 coats Cabot's double white. Exterior sash and door 4 coats oil paint. Roof, Cabot's creosote stain.

BATHROOM FIXTURES—Standard Sanitary Manufacturing Co. Cabinet by United Metal Box Co.

HOT WATER HEATER—Hotzone water heater by the Welsbach Co.



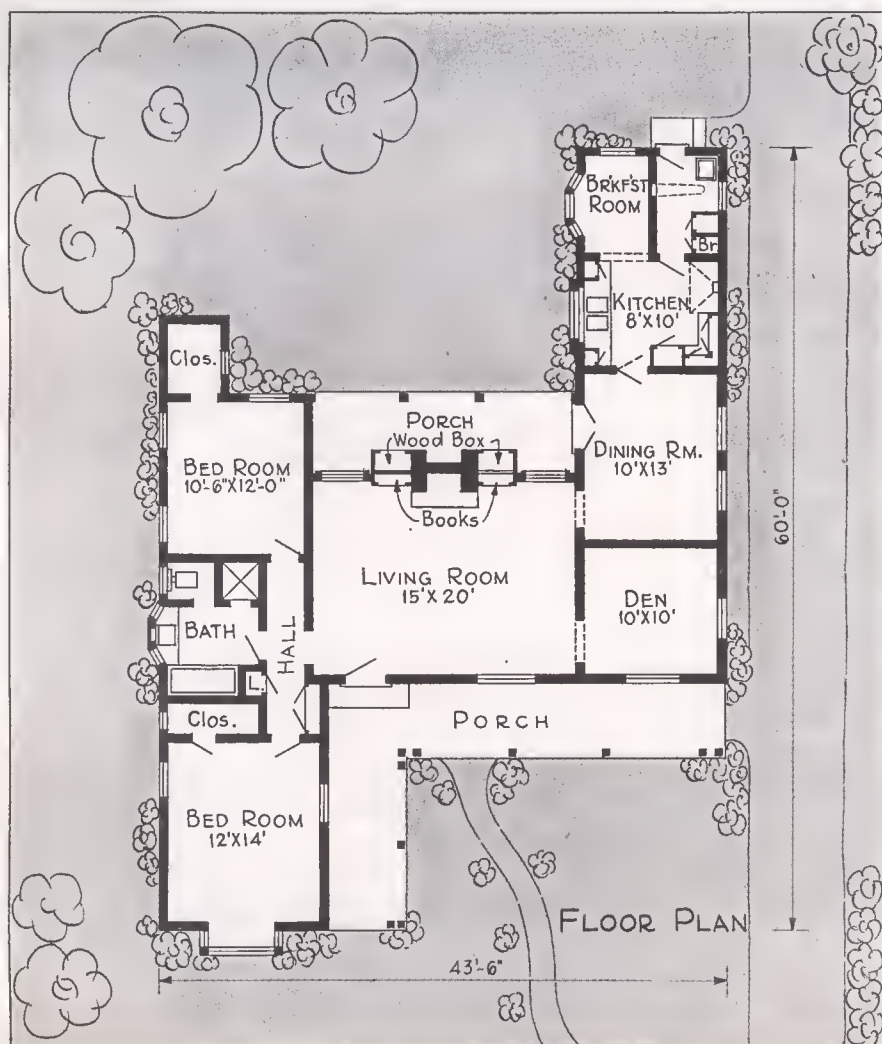
THE LIVING ROOM, above, has an attractive fireplace, slightly recessed, with paneled wall. The kitchen features ample built-in cabinets with flush doors. Details of fireplace and trim below.





WITH BARBEQUE FIREPLACE

Leo Bachman, Los Angeles, Architect
Wm. Mellenthin, Los Angeles, Builder



FRONT and back porch areas are important features of this seven room house with spacious living room, den and bedroom fronting on the street. An outdoor fireplace and lounging terrace heighten the Bohemian mood which predominates this studio-type cottage. The living room fireplace with its band-saw scroll across the top of the wall panelling and beamed ceiling further carry out the general atmosphere.

Construction Features—Foundation, Solid continuous concrete footings; Exterior walls 2x4 studs with brick veneer; Interior walls, stucco for all rooms with exception of bedrooms which are wall-papered; Roof Redwood shingles stained green; Plumbing, Standard fixtures, bath rooms tiled; Heating, Monarch wall heaters—gas units. Living room presents an unusual effect in fireplace treatment with white pine panelling, built-in bookcases at each side of an extremely wide fireplace and woodboxes underneath the built-in features. A band-saw scroll across the top of the fireplace panelling adds to the unusual effect. The exposed beamed ceiling is of pine, painted off white to harmonize with the interior stucco walls of the room.



ABOVE: Outdoor fireplace and lounging terrace add to the informal atmosphere of this Carmel studio home built by Wm. Mellenthin, North Hollywood. BELOW: Living room with fireplace. The exposed beamed ceiling is of pine painted an off white to harmonize with the interior stucco walls.

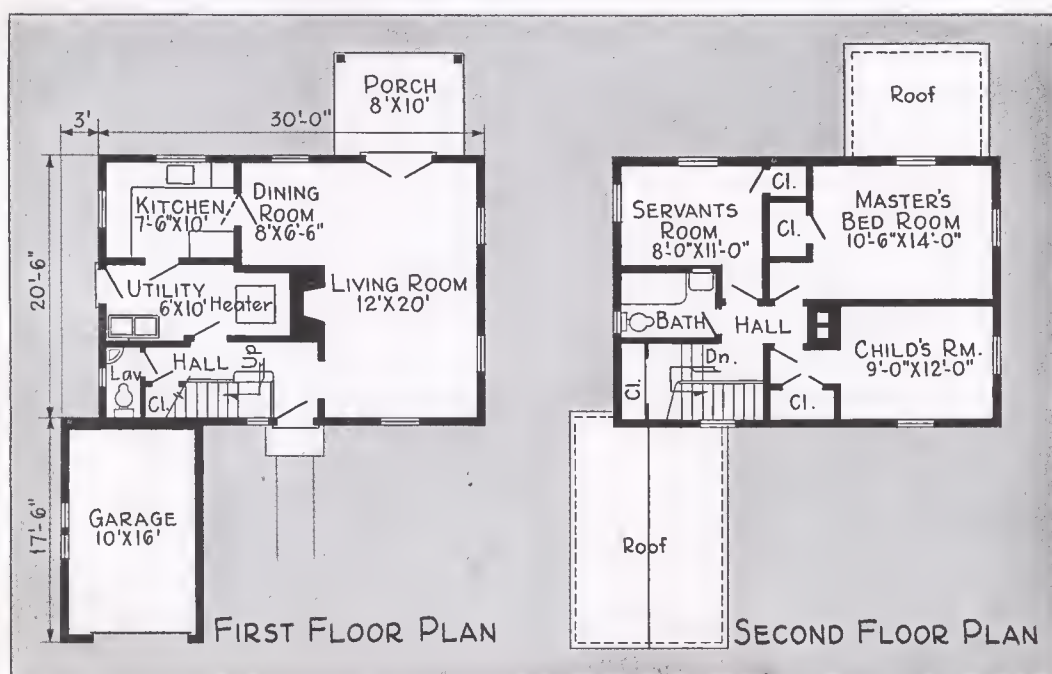




SIX ROOMS; ATTACHED GARAGE; NO BASEMENT

Located in Kenilworth, Illinois
L. Morgan Yost, Architect

IN CONTRAST to the larger Georgian design on the preceding pages, Architect Yost has concentrated on space and construction economy in this charming Colonial cottage. The results are unique in compactness and livability. Combined living room-dining alcove gives a feeling of spaciousness to a house this size. Rear porch allows privacy for enjoyment of the garden. Plumbing and utility fixtures are grouped together. On the second floor, there are three bedrooms, bath and storage space; an unusual feature is wardrobe off the stair landing. Insulation above the second floor ceiling is 4 inches of J-M Rock Wool, Silvercote in the sidewalls. Reverse side of shi lap exposed for texture was used for first floor exterior walls and Weatherbest stained shingles above.



AN interesting feature is the island type construction under chimney, hearth and heater which consists of a 10-inch concrete wall around this area supporting a 4-inch slab; first floor joist framing runs from this support to outside walls. There is a 2-foot air space under first floor reached by an access door and having a sand fill on the bottom. Central location of Rudy gas-fired winter conditioner on the first floor allows short ducts.



CALIFORNIA FRAME-STUCCO BUNGALOW

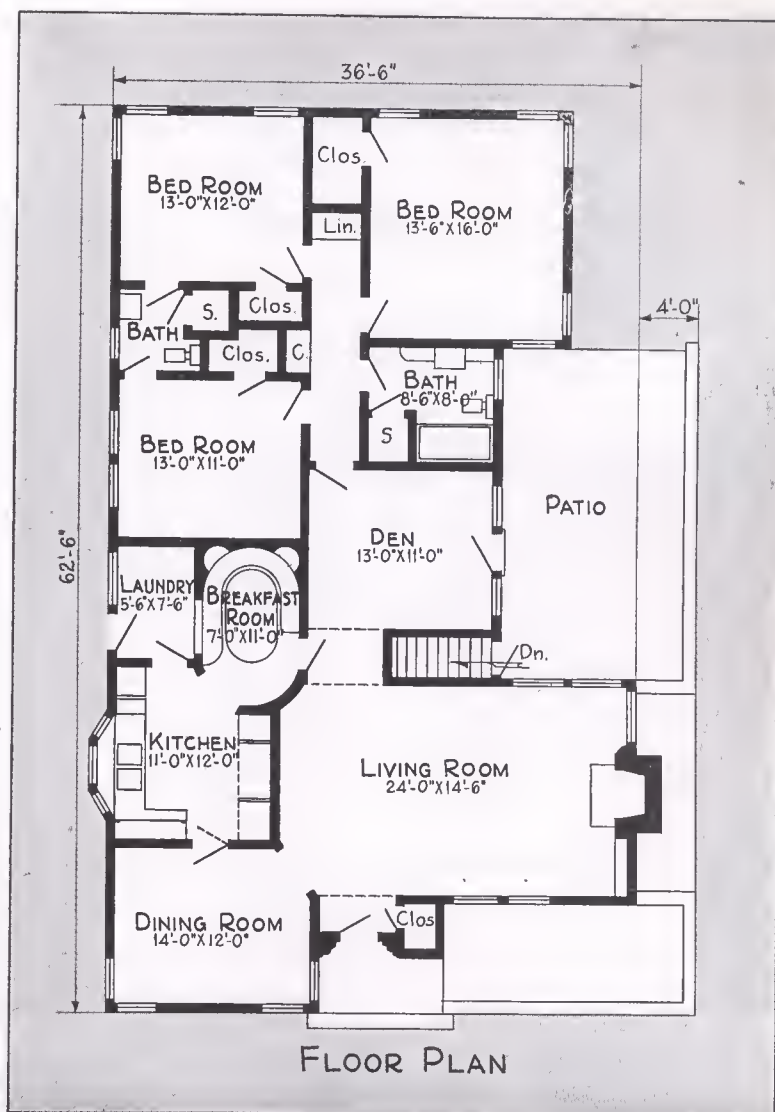
Homes Inc., Los Angeles, Builder

N. P. Bengston, Designer

THE ATTRACTIVE modern California bungalow pictured above contains eight rooms and includes three master bedrooms, two tile baths, exceptionally large living room, cozy den, full tile kitchen, combination breakfast room and cocktail lounge, and well planned patio. Cubic contents are 25,600 cubic feet.

Some of the products and equipment are cedar 5-2 shingles, frame and stucco exterior, texture plaster in living room and den, grass cloth on dining room walls, Sanitas on bedroom walls, tile walls in kitchen and bathrooms, circular fireplace of modern design in living room, and unit heaters. There are oak plank floors in all rooms except kitchen, baths and laundry; kitchen has a linoleum floor laid in pattern and color to match tile on walls.

An interesting design feature is the use of decorative wood awnings above the corner windows of the dining room. A band of V-jointed horizontal siding between the windows helps to give a pleasing modern effect to the house.





HOME IN SEATTLE, WASH.; FOR PLANS SEE PAGES 106 & 107

CHAPTER IV

LARGER HOMES

WITH ADDED VALUE



"I am confident that the sentiment for home ownership is so embedded in the American heart that the millions of people who dwell in tenements, apartments, and rented rows of solid brick have the aspiration for wider opportunity in ownership of their own homes. To possess one's own home is the hope and ambition of almost every individual in our country, whether he lives in hotel, apartment, or tenement."

—Herbert Hoover, addressing the opening general meeting of The President's Conference on Home Building and Home Ownership, Dec. 2, 1931, Washington, D.C.

THESE two views show the interior treatment of the beautiful house presented on the two following pages. The breakfast room at the right is finished with random width western maple V-joint sheathing; the attractive living room below has wainscot, walls and ceiling of vertical grain fir.

Outstanding Home Designs Selected From North, South, East And West



The Following Section of Home Designs Exemplifies the Extra Value Builders Are Putting Into the Larger Homes Today. Examples of Good Exterior Styling, Practical Planning and Construction Methods Are Gathered from Many States.





SHINGLED HOME FROM THE NORTHWEST

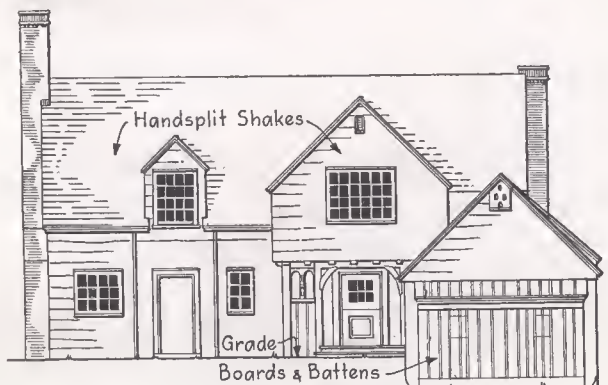
**George Wellington Stoddard,
Seattle, Wash., Architect**

A. S. Hansen Co., Contractor

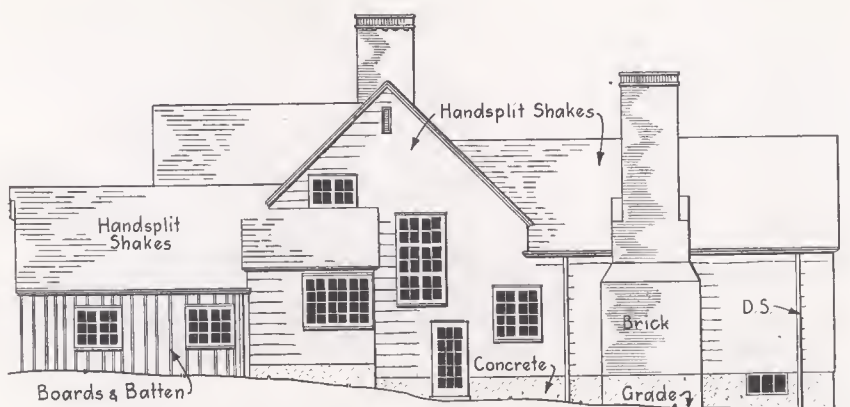
O. E. Nilsen, Owner

Location, Loyal Heights, Seattle

Exterior, Red Cedar Shingles



FRONT ELEVATION



RIGHT SIDE ELEVATION

For presentation in full colors
see page 103

A hand-drawn floor plan of a house with the following dimensions and room labels:

- Overall Dimensions:**
 - Top: 13'-11" (left section), 5'-0" (middle section), 5'-8 1/2" (right section)
 - Right: 2'-9 1/2", 5'-2 1/2", 4'-5 1/2", 4'-3", 3'-9", 4'-2", 3'-5"
 - Far Right: 20'-5" (total width)
 - Left: 18'-0" (total height)
 - Bottom: 8'-8" (left section), 3'-5" (middle section), 4'-2 1/2", 2'-6", 5'-0", 2'-6", 4'-2 1/2", 3'-5"
- Rooms and Features:**
 - BED ROOM:** 15'-0" x 12'-0" (top right)
 - BED ROOM:** 18'-0" x 13'-0" (bottom center)
 - BATH:** (center)
 - DRESSING RM.** (center)
 - BALCONY:** (top left)
 - STORAGE:** (top right)
 - Clos.** (closets, near bedrooms)
 - Dn.** (downstairs stairs, near balcony)
- Other Dimensions:**
 - Vertical on left: 18'-0"
 - Vertical on right: 6'-9", 7'-10", 7'-10"
 - Vertical on bottom right: 6'-2 1/2", 8'-7 1/2", 2'-7 1/2", 7'-1 1/2"
 - Vertical on left of bottom section: 4'-3", 2'-7 1/2", 2'-1 1/2", 6'-1", 2'-3", 3'-3", 4'-1"

This detailed floor plan shows a single-story residence with the following features:

- LIVING ROOM:** 32'-6" x 18'-0". Includes a fireplace on the left wall and a built-in bench.
- DINING ROOM:** 15'-3" x 14'-6". Features a central island and access to a rear porch.
- KITCHEN:** 15'-3" x 8'-0". Includes a sink, stove, refrigerator, and a broom closet.
- BREAKFAST ROOM:** 9' x 8'. Adjacent to the kitchen.
- GUESTS RM.:** 10'-6" x 11'-0". Located at the rear right.
- BATH:** Located between the living room and guests room.
- Garage:** 20'-6" x 16'-6". Attached to the side of the house.
- Hallways:** An entrance hall connects the front porch to the interior rooms. A second porch is located off the dining room.
- Closets:** Multiple closets are provided, including wardrobes in the bedrooms and a linen closet.

The overall dimensions of the building are 73'-1" wide by 32'-10" deep. The lot measures 73'-1" wide by 17'-4" deep.

[illegible]

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ALL-WOOD dry-wall construction utilizing both plywood and solid lumber characterizes this home. Living room is finished in vertical grained fir, dining room spruce veneers, breakfast room western maple, entrance hall fir sheathing with 6 x 6 inch beams and plank ceiling, kitchen knotty pine. Wall construction utilizes studs, shiplap sheathing, building paper and red cedar Colonial resawn shakes. Studs are backed inside with No. 3 cedar flooring, then the finish material. The roof is covered with red cedar shingles laid 10 inches to the weather. Exterior posts are of cedar, hand hewn and sanded. Exterior trim is vertical grained fir. This house is heated with oil burned in a forced air winter air conditioner equipped with filters. Flashings, gutters and downspouts are of copper. Chamberlin metal weatherstrips. Frantz upward-acting tilt-up garage doors. Second story ceiling insulated with fill-type insulation.

CALIFORNIA-MONTEREY STYLE HILLSIDE HOUSE

Wm. Mellenthin, Los Angeles, Builder

Leo Bachman, Los Angeles, Architect

THIS two-story, hillside home overlooking Silver Lake, Los Angeles, is designed to take full advantage of the terrain and of the view offered on all sides. Entrance is on the upper floor, with sleeping rooms arranged on the lower level. There are four bedrooms and three bathrooms, one bathroom connecting with the service porch on the second floor. Wide overhanging balconies on both sides of the house give it an individual setting, while the barbeque fireplace in a forecourt which slopes

downhill, is another interesting feature. The same chimney serves flues from two other fireplaces, one in the corner of the master bedroom, the other in the living room as seen below.

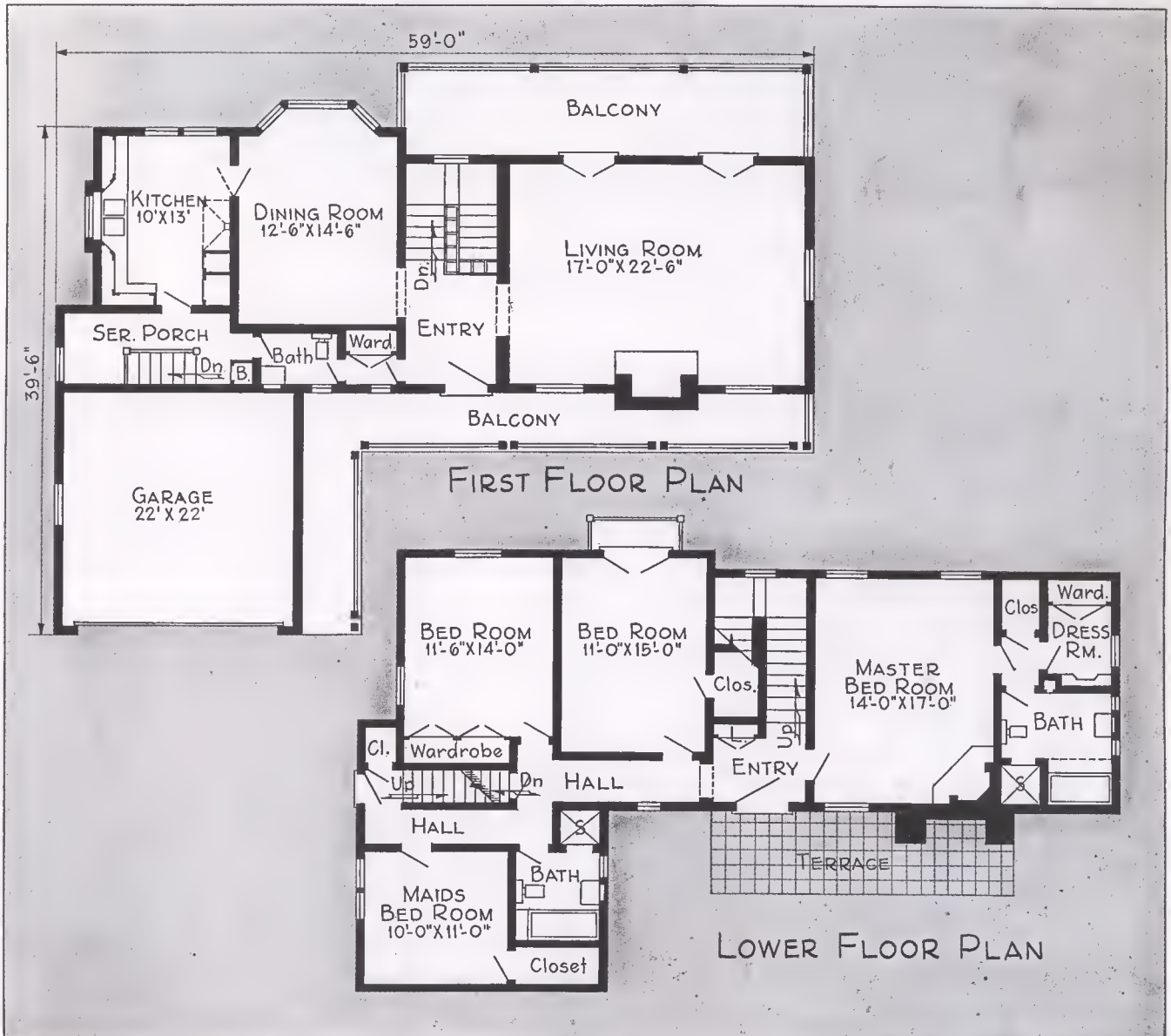
Construction Features—Foundation: Continuous concrete footings; Exterior: Lower story brick, Upper story knotty pine vertical boards with antique white finish; House painted white with golden yellow trim; Roof: Red cedar shingles with tile ridge.



ROUGH-hewn timbers set off the ceiling of the living room from the pine panelled entry hall. The beamed ceiling is insulated with Celotex exposed on the inside of the room. In the living room the pine is painted white with the knots left in natural finish, while the entry hall is in natural finish Ponderosa pine.



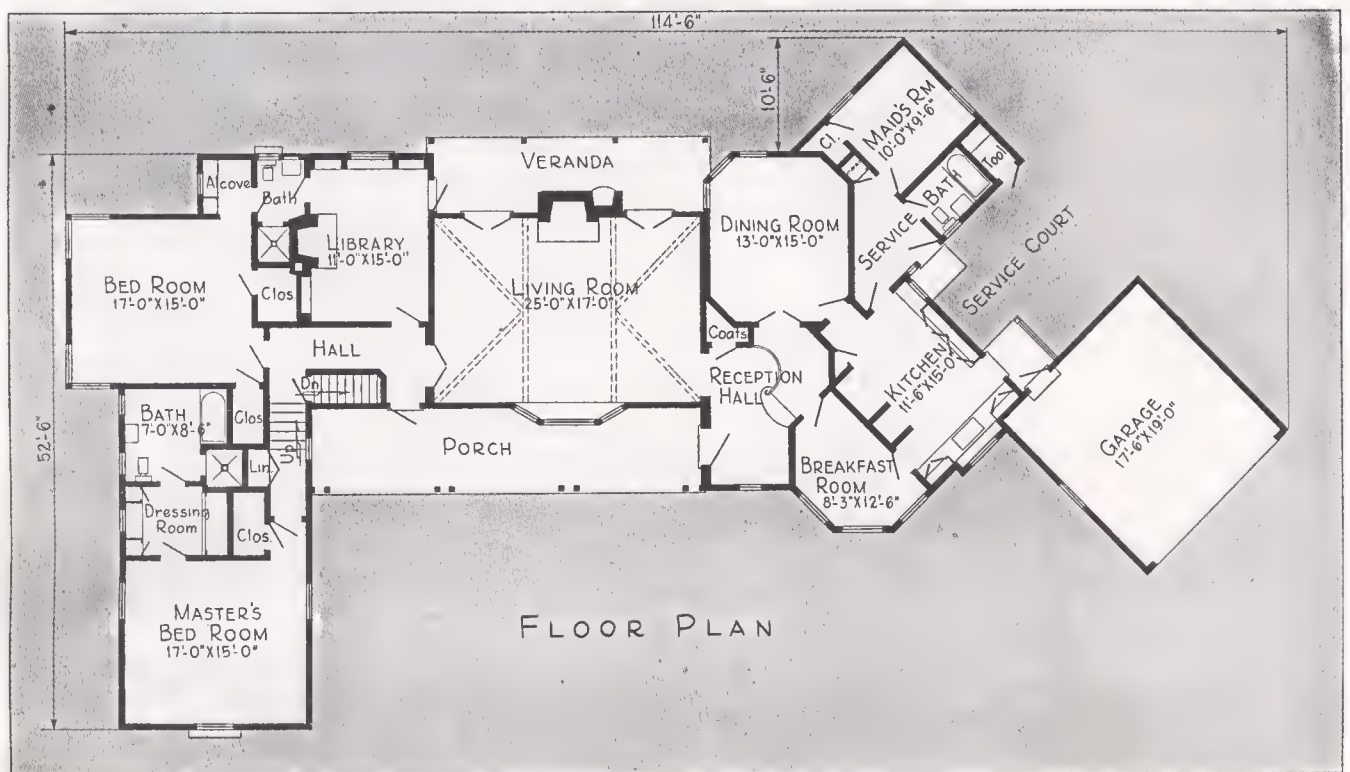
Two-story, California-Monterey Hillside Home, living quarters arranged on upper level and sleeping rooms on lower level, with barbecue fireplace in forecourt. For close-up of this fireplace see page 4. Overhanging balconies on two sides.





CALIFORNIA FARMHOUSE STYLE

Built at Brentwood Highlands, Los Angeles





"WINDSOR HOUSE"

Richard F. King, Los Angeles, Architect
Capitol Co., Builder

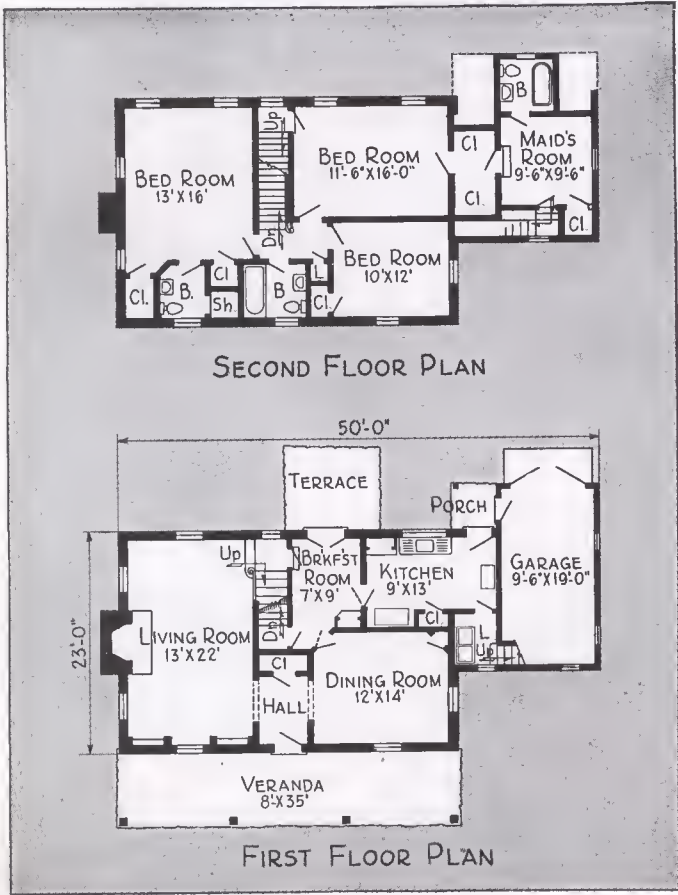
ABOVE is the Living room, "Windsor House," Brentwood Highlands, Los Angeles, showing open trussed ceiling of shiplap Douglas fir; wallpaper is beige and gray scenic pattern, extending from wood wainscoting to the ceiling beams. Carpet is blue broadloom, draperies, unglazed chintz with deep blue background and garden flower design. Fireplace chairs are upholstered in white with blue cording. Other upholstered pieces are in beige and blue damask. Blue is the dominant color, being selected because of its complimentary relationship to the mahogany pieces in the room. Furnished by Barker Bros. Los Angeles.

TO RIGHT is the breakfast room; Wallpaper in a green and white bamboo design extends to the ceiling cornice from the floor board. Bamboo poles provide a cornice for green draperies at the window.





WHITE COLUMNS and a broad porch lend dignity and charm to this Cheelcroft house. Architect, Wallace Dunlop, Ridgewood, N.J.



**These Houses Are 50%
Better Values Than 1926
Says Harold W. Cheel**

3 BATHS, IMPROVED PLAN, MODERN EQUIPMENT

HAROLD W. CHEEL is a builder with a reputation for reliability and fair dealing. He is one of the few builders we know of who elects to live in his own development—an attractive residential community which he calls Cheelcroft, located at Hohokus, N.J. Cheel was building houses in 1926, he built houses during the depression, and he is still building fine, livable, well equipped homes. It is his belief that the two houses illustrated above, selected from a number he built this year, represent easily a 50 per cent greater value than comparable homes built in 1926.

The tremendous strides made in home building since 1926 are nowhere better illustrated than in the Cheelcroft houses. Air conditioning, insulation, modern kitchens and baths, remarkably comfortable and efficient floor plans are features of the



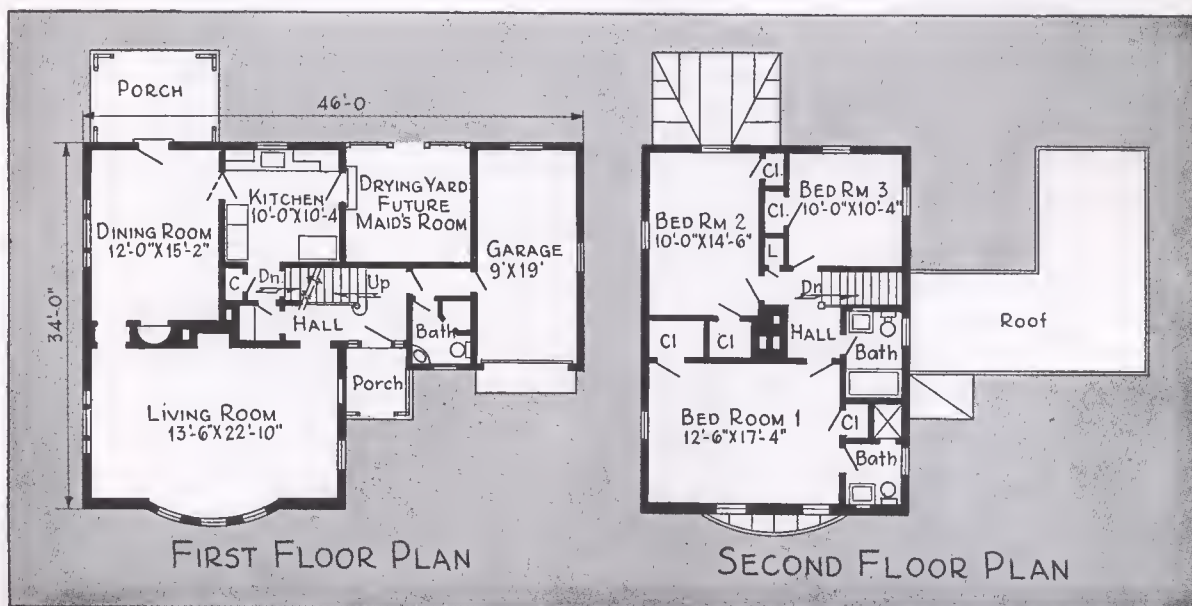
SIX ROOMS, three baths are included in this smart Regency style home, featuring many notable improvements without corresponding increase in cost. Adams and Prentice of New York City were the architects.

1937 homes. The house of today is so vastly improved it can hardly be compared with 1926. Cheel attributes the high value of his 1938 homes to greater efficiency in construction—use of power equipment, improvements and standardization of equipment and materials.

Considering the two houses above, the white columns and broad porch of the house at left give dignity and appearance of size. There are three bathrooms, four

good bedrooms, a laundry, cheerful breakfast room.

The modern Regency house at the right is an excellent illustration of today's value. There are three full baths, one of which opens off the master bedroom—an indication of the trend toward more bathrooms and less cubage. The floor arrangement is unusual, but economical, with a fine, cheerful living room and a convenient side entrance with connection to the garage.

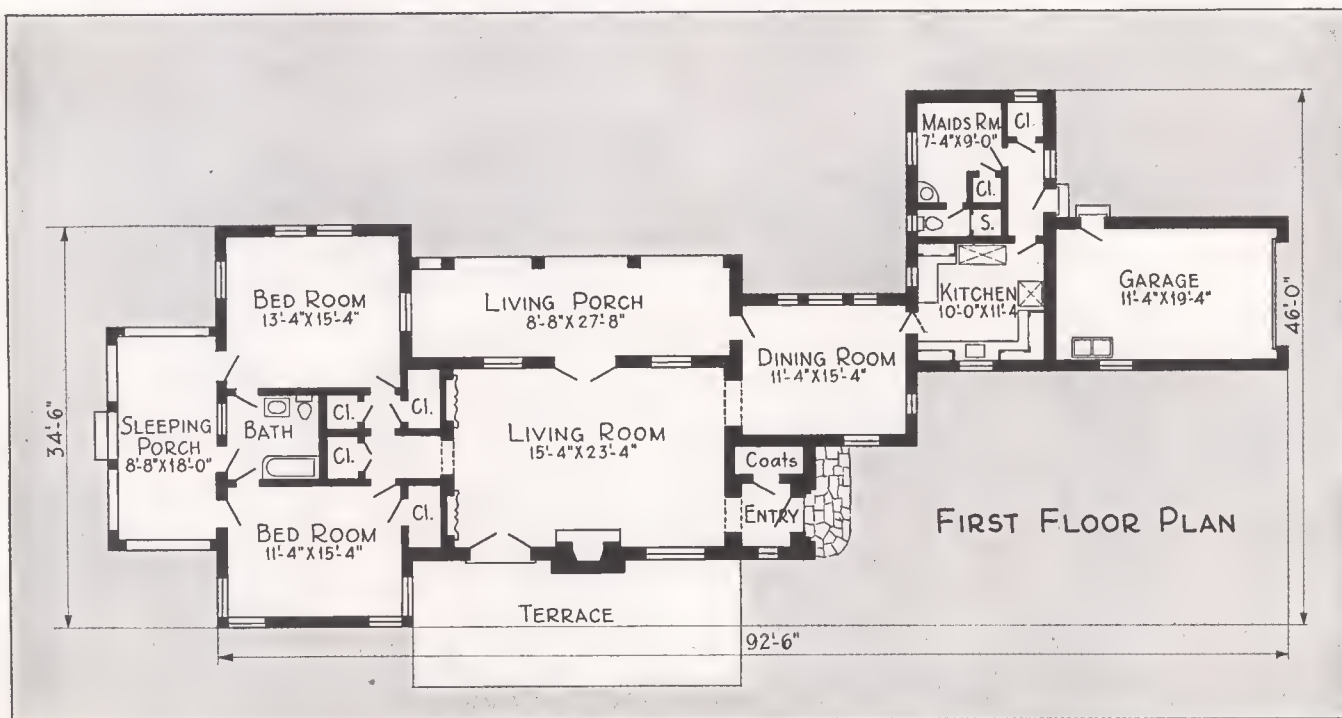




AMONG THE PINES AT ORLANDO, FLORIDA

Maurice E. Kressly, Architect
A. W. Spinney, Inc., Builder

THE rustic charm of this Florida home is set off by the pines and palms which surround it. Rough concrete masonry exterior walls are painted a salmon color and are set off by the red stained concrete tile roof and sections of rough hewn stained siding in the gables. A rambling layout, as indicated in the plan below, takes advantage of the climate with porches and terrace, and plenty of cross ventilation for the rooms. Floors throughout the house are a 3-inch concrete slab laid over a fill.



THE opposite side of the house shown in the view at the right reveals the porte cochere alongside the garage and the enclosed living porch that opens off the living room. The over-all length, which exceeds 100 feet, gives this home an appearance of spaciousness for its six-room and garage size.



THE living room features a large fireplace made of hand shaped concrete masonry which, like the rest of the interior wall finish, is finished with cement paint applied directly to the blocks. Seventy-five per cent of the interior partitions are of concrete masonry, the balance being frame. The ceiling is in rustic cathedral style.



A CLOSE-UP of the elevation appearing at the top of the page shows the texture and treatment of exterior wall surfaces. Notice the rustic lighting fixture in the left foreground and harmonizing rough finish masonry wall, trim and roof.



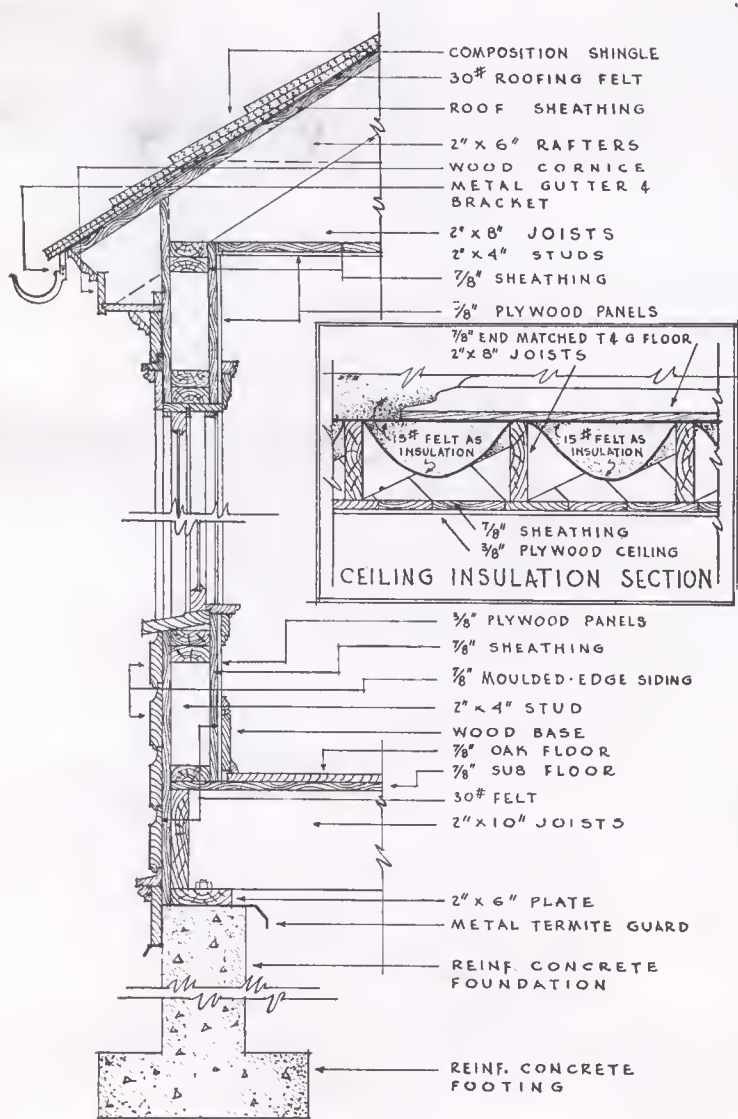


THE HARDWOOD MODEL HOME, Memphis, Tenn.

**Southern Hardwood Producers, Inc.,
Sponsor**

**Geo. Mahan, Jr., and Everett Woods,
Architects**

Robert L. Irwin, Builder



UNIQUE application of various species of Southern hardwoods for interiors of residences is demonstrated in the Model Home built at No. 100 Devon Way, Hedgemoor Subdivision, in Memphis, Tennessee by the Southern Hardwood Producers, Inc., and opened to the public on August 1.

This attractive home, which has been characterized as "the Hardwood Home," has been built primarily to show the beauty, comfort and permanence of Southern hardwoods for interiors of residences and the different ways in which they may be effectively used.

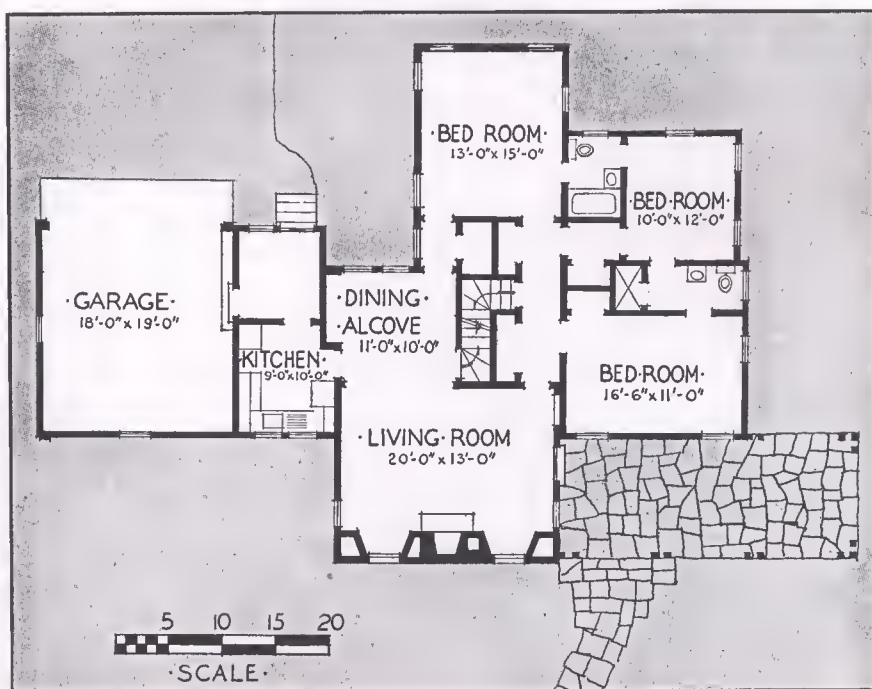
In design the house is a modified Colonial type, modern in both style and arrangement. It features all wood construction for both exterior and interior, but is regarded as of particular importance in showing how the various and different species of Southern hardwoods may be utilized to advantage and with economy to provide attractive interiors for all types of residences. This model home is distinctly "dry-built," the interior walls and ceilings throughout being covered with hardwood plywood in varying pattern designs, some painted and some showing the natural beauty of the wood.

The living room and dining alcove are especially attractive. The living room has walls covered with wide red oak boards laid horizontally, heavy undercut grooves or beads separating each board. All doors and interior trim are of oak and the floor is of quartered white oak in narrow strips. The dining alcove, just off the living room, has walls of ribbon stripe black gum with ash trim.



KITCHEN in Hardwood Model was designed to save time and to make the time spent in it a joy and not a burden. It is compact with plenty of cupboard space, two windows over the sink, double drain board, stainless steel back of the stove, and has a hood and exhaust fan that whisks the odors and heat of cooking out of the kitchen. The walls, woodwork and cupboards are of solid southern magnolia, finished natural with heavy varnish, beautiful and easy to keep clean. The ceiling is hardwood plywood enameled white. A decorative stripe of red makes the kitchen almost too good looking for a kitchen. The floor is southern red beech and finished to stand hard usage without wearing off. The workroom adjacent to the kitchen for convenience and efficiency, is likewise finished in magnolia, except the color of the ceiling is a canary yellow. The floor is of the same tough-wearing southern red beech.

FLOORS crafted and donated by the following members of the National Oak Flooring Manufacturers Association, E. L. Bruce Co., Nickey Bros., Inc., DeSoto Hardwood Flooring Co., and Memphis Hardwood Flooring Co. Floors laid and finished by Oscar Cluck. The completion of this model home was made possible through the cooperation of the following firms: Furniture and rugs loaned by Armstrong Furniture Co.; Pictures loaned by Memphis Photo Supply Co., and Porch and lawn furniture loaned by James E. Stark Co. Geo. Mahan, Jr., and Everett Woods, Architects; Robert L. Irwin, Builder; Arnold Bros. & Stubbe, Painting and Decorating; McCrory Electric Co., "Certified" Wiring; Lee Lumber Co., Millwork, Cabinets and Doors; J. P. Jordan Lumber Co., Framing and Siding; Cook & Nichol, Inc., Roofing; W. J. Northcross Mantel & Grate Co., Marble, Tile and Fireplace.





COUNTRY HOMESTEAD with CITY CONVENIENCES

Built by Smith and Dawson, Chicago, at
Country Club Acres, Prospect Heights, Ill.
W. D. Sorgatz and C. J. Kastrup, Architects

SPECIFICATIONS

EXCAVATION: Strip the top soil from the site of the building and five feet beyond on all sides and pile same on premises at a convenient location for use later in finished grading. Excavate the entire area to be occupied to the levels required.

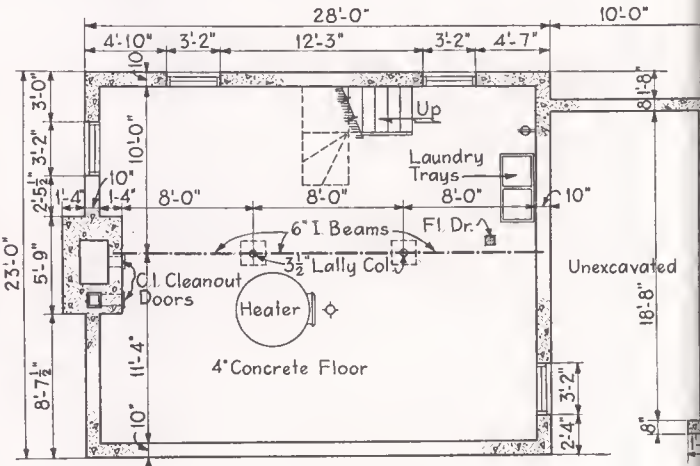
After footings and foundation walls are built, set and prepared, the excavations around same shall be backfilled to a depth of one foot over and around the drain tile with broken stone, gravel, spalls or cinders and the remainder backfilled with earth other than top soil, all properly soaked with water and thoroughly packed, tamped, and puddled to within six inches of the finished grades indicated.

Rough concrete block retaining walls as shown are included in this branch of the work.

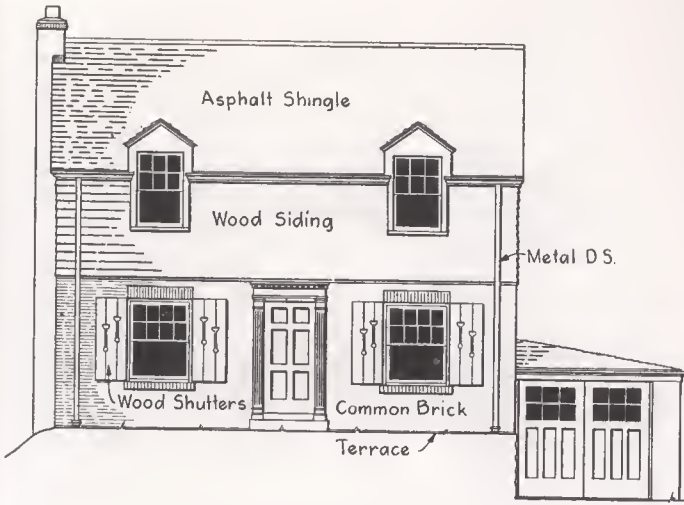
Provide an 8 foot driveway consisting of 4" of pit run gravel

(Continued to page 120)

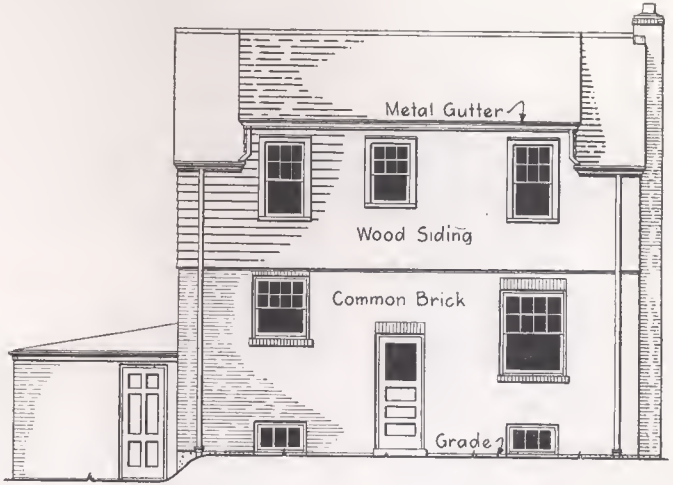
AROUND certain cities people are buying suburban homes on fair sized plots which offer the advantages of country living combined with urban conveniences. This attractive model homestead of moderate price is built on a one and one-half acre site but, as seen in the plans, the efficient layout would be equally suitable on an average lot. Electric water supply system and septic tank take care of sanitary service requirements. The specifications present interesting details of construction.



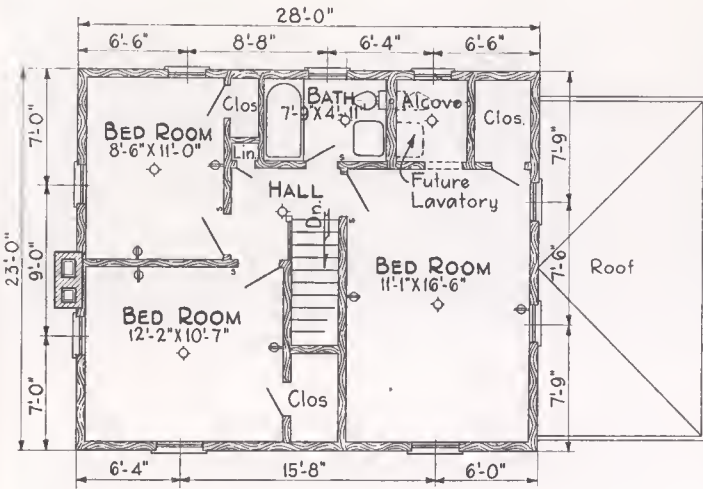
BASEMENT PLAN



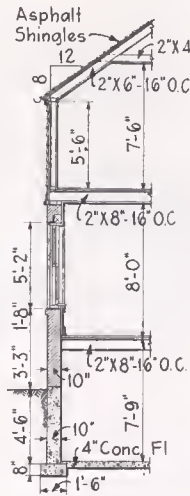
FRONT ELEVATION



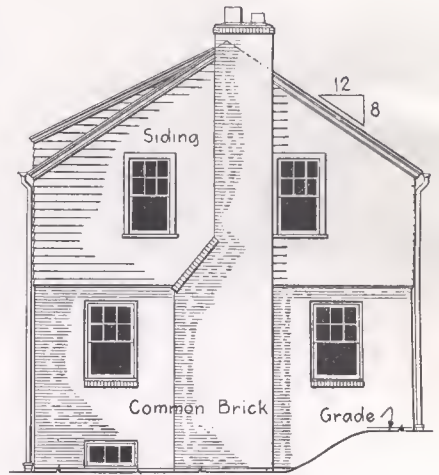
REAR ELEVATION



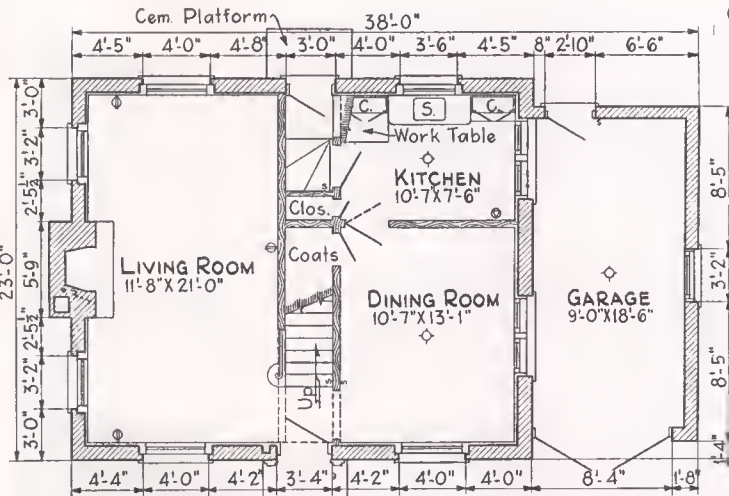
SECOND FLOOR PLAN



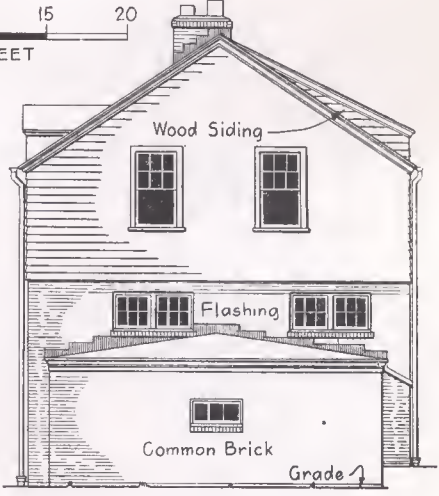
TYPICAL WALL SECTION



LEFT SIDE ELEVATION



FIRST FLOOR PLAN



RIGHT SIDE ELEVATION

SPECIFICATIONS

(Continued from page 118)

and $\frac{1}{2}$ " of limestone screenings. A 12" corrugated Armco Iron culvert shall be provided where driveway crosses ditch; flagstone walks as indicated on plot plan.

CONCRETE WORK: All concrete shall be composed of one part portland cement, eight parts of fine and coarse aggregate so proportioned as to provide the maximum density, and ten per cent of hydrated lime. Cement topping shall consist of one part portland cement to two parts of fine aggregate.

Lay four inch layer of clean crushed cinders or gravel well puddled, tamped and leveled and place a $3\frac{1}{2}$ inch base slab of concrete. Before this concrete has its final set, a $\frac{1}{2}$ -inch layer of cement topping shall be placed and troweled to a smooth, dense surface, level or pitched to drain as indicated.

MASONRY: All brick shall be laid in lime-cement mortar, consisting of one part portland cement, two parts of lime putty, and six parts of sand or shall be laid in natural cement mortar.

Exterior walls are to be constructed as shown by details, with 2" air space between inner and outer bricks. Full brick headers equal to one seventh of the wall surface and uniformly distributed are to be provided for all such walls. All joints to be filled solidly and exterior joints struck.

Build fireplace in living room as detailed, with fire brick back, sides, and back hearth laid in fire clay mortar. Furnish and install Heatilator of size and type indicated on drawings, together with all registers and flues required to provide a complete installation of this item.

Fireplace and heater flues shall be lined with terra cotta flue lining entire length of flues and extending two inches above the chimney cap.

No mortar shall be left on face of brickwork; exterior surfaces of all brickwork back of terraces shall have all voids filled and entire surface mopped with a heavy coat of asphalt.

Fill in between first floor joists with common brick and mortar to completely seal openings between basement and exterior walls.

Erect steel girders and lally columns with flanged bases and caps; steel angle lintels for all openings above basement.

CARPENTRY: All lumber for joists, sills, and rafters shall be No. 1 Common Y. P. or Fir. All other framing lumber shall be No. 2 Common Y. P. or Fir. Studs shall be 2"x4" spaced not over 16" o.c. and doubled around all openings.

Joists shall be spiked to studs wherever possible, with 1"x3" bridging for all spans of over 8 feet. Double joists under bearing partitions. Double all trimmers and all headers over 4 feet in length. Headers carrying more than three tail beams to be supported by metal stirrups. Corner posts shall be made of 3 2"x4" blocked to form nailing corners for lath.

1"x2" vertical furring strips of 16" o.c. to be provided on all interior brick walls receiving plaster. Secure with cut nails driven into dry joints of brickwork. Furnish necessary grounds of thoroughly seasoned clear Western White Pine.

Sheathing for exterior wood walls to be 1" Celotex applied vertically with joints on studs; horizontal joints backed up with 2"x4" blocking between studs. Roof sheathing 1"x8" square edge Y.P.

Exterior walls are to be covered with beveled wood siding not less than $\frac{5}{8}$ " thick at butt edges, clear Redwood or Cypress.

All floors shall consist of a subfloor and a finished floor. Subfloor to be 1"x8" square edge Y.P. nailed securely to each joist with three nails.

Lay heavy building paper over subfloor and strip with lath, then lay finished floor of $\frac{3}{4}$ "x2 $\frac{1}{4}$ " matched Red Oak flooring.

All finished floors to be blind nailed to every subfloor strip, each piece driven well into position with all joints closely fitting. Finished flooring shall be sanded or scraped to a smooth and level surface and covered with a layer of heavy building paper until painter's finish is to be applied.

Finished flooring in kitchen and bathroom shall be 1"x6" T. & G. Pine or Fir flooring.

Frames for exterior doors to be clear White Pine $1\frac{3}{8}$ " thick, rabbetted for door and screen. Frames for interior doors shall be $\frac{7}{8}$ " thick Y.P. All sills shall be saw kerfed.

Staff beads shall be attached to frames in a temporary manner until frames have been caulked.

Interior trim throughout shall be Western Pine, clear grade, sound and thoroughly seasoned and kiln dried, smoothly sanded with all mill marks removed and with no cross sanding.

Garage doors $1\frac{3}{4}$ " thick W.P. Interior doors to be $1\frac{3}{8}$ " Oak.

All exterior sash shall be made of clear, sound, well seasoned Western White Pine. All openings in exterior masonry walls are to be caulked between the wood frames and the masonry with oakum, and sealed with elastic caulking compound.

Floors of kitchen and bathroom to be covered with standard gauge inlaid linoleum laid on a layer of unsaturated rag felt, in waterproof cement, and rolled with a heavy roller.

ROOFING AND SHEET METAL: All roof surfaces except where indicated otherwise are to be covered with slate surfaced asphalt shingles weighing not less than 170 lbs. per square, over one layer of 15 lb. waterproof building paper.

Gutters and downspouts as indicated on drawings of 26 ga. Galv. Iron. Hangers for gutters to be placed under the shingles. Downspouts secured to brickwork with clamps built into the masonry. Cement downspouts into sewer stubs. Provide 26 ga. G. I. flashing. Counter flashing to be built into masonry.

GLAZING: All glass shall be set in first class and workmanlike manner. Glass shall be cut accurately to fit sash or frames.

LATHING AND PLASTERING: Lath for all exterior walls and ceilings of second story shall be $\frac{1}{2}$ " Celotex plaster lath. All other surfaces shall be Rock Lath. Three coat gypsum plaster work.

PAINTING: All lead shall be strictly pure, National Lead Co. All linseed oil, strictly pure; all colors, strictly pure pigment ground in linseed oil. Enamel and undercoating, Pratt and Lambert Vitrolite. Floor varnish Pratt and Lambert No. 61. Ready mixed paint, Sherwin-Williams best grade.

All work to be painted shall be primed as soon as practicable after receipt of same at building; all exterior wood, one coat of lead and oil or ready mixed paint in addition to the priming coat. All exterior metal except concealed flashings, one coat of lead and oil or ready mixed paint in addition to the priming coat. Inside of gutters, one coat of red lead. All trim, sash, doors, and structural steel in basement, one coat of lead and oil or ready mixed paint in addition to the priming coat. All trim and woodwork to be finished with three coats.

PLUMBING: Lay 4" dia. farm tile footing drains around building, connect with floor drain and run to sanitary sewer. Lay 4" dia. vitrified clay tile sewers with cement joints from house to septic tank and connect with disposal field at a point not less than 30 feet from house. Lay 4" dia. farm tile disposal field with 100 lin. ft. of open tile. Provide brick septic tank in accordance with regulations, and grease catch basin for kitchen drain.

Provide cast iron soil stack connected to sewer and extending through roof with lead flashed increaser. Connect all fixtures and provide re-vent for each fixture.

Provide galvanized iron lines to all fixtures, with air chambers at each fixture. Risers to be valved in basement. All lines to drain to main valve near pump. Sizes to be sufficient to provide a satisfactory rate of flow at each fixture.

Dig well to a depth to provide an adequate flow of pure, clean water. Install Dayton pump and pressure tank combination fixture with $\frac{1}{4}$ H.P. electric motor.

Provide 30 gal. hot water tank with coal fired heater and auxiliary heating coil in furnace. Run hot water lines to all fixtures except toilet.

Provide Standard Pembroke recess apron tub, Standard C.I. enameled lavatory, Standard china two-piece closet, Standard roll rim sink with steel cabinet, and Standard two part granite laundry tray with steel frame.

Soil stack to be plugged at base and filled with water to top, left for at least one hour, examined for leaks at all joints, and re-caulked as required to provide a water and air tight installation. Water piping shall be tested under pressure after installation and any defective parts replaced to provide a water tight installation.

ELECTRIC WIRING: All wiring of every description, excepting low voltage bell circuits, shall be run in rigid pipe conduit.

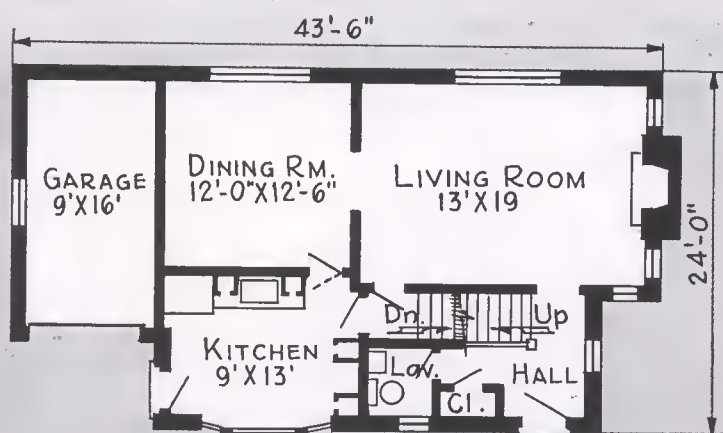
HEATING: Install Sunbeam warm air coal fired heating plant of sufficient size to heat all rooms uniformly to a temperature of 70 degrees F. with outside temperature at—10 degrees F.



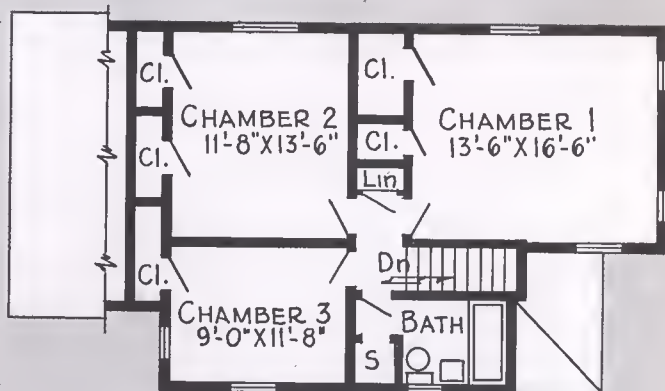
121

FRENCH NORMAN type above has lots of architectural appeal, and the builders have made the most of the floor space. They feature ample closets, attached garage, bay window in kitchen, Tudor doors. Other features of the Kanner houses include copper leaders and gutters, copper flashing, steel girders, electric ventilating fan, shower door of chromium plate and glass, decorative hardware and electric fixtures.

FRENCH NORMAN AT MODERATE COST



FIRST FLOOR PLAN



SECOND FLOOR PLAN



ATTRACTIVE GEORGIAN HOME ON WOODED SITE

L. Morgan Yost, A.I.A., Wilmette, Ill., Designer and Builder

A CLEAN CUT modern style has been given to the traditional Georgian form of this 7-room house to make it very attractive. Horizontal lines are repeated in the muntins, belt course, quoins and entrance hood. Attached garage is placed at an angle to the house, which is located on a winding street; this gives a more open effect to the front yard. Center hall type plan has been laid out for good

access; a small service hall connects closets, basement stairs, lavatory, breakfast room, kitchen and grade entrance. Large recreation room features a wood-burning fireplace. For outdoor living there is a porch off living and dining rooms; above this, a sun deck is reached from the master bedroom. Closet space and bath arrangement are well planned for convenience.

OUTLINE SPECIFICATIONS

FOUNDATION: 12" poured concrete walls on 24" footings. Walls completely water-proofed.

FLOORS, Basement, Garage and Porch: 5" concrete on cinder bed.

STRUCTURAL STEEL: "I" beams and lally columns.

SEWERS: Foundation drain tile to insure dry basement. Separate storm and sanitary sewers. Catch basin. Lead water service.

CONSTRUCTION: Select common brick veneer, Bondex painted, over wood frame and 13/16" Insulite Bildrite sheathing. Lumber, No. 1 yellow pine.

INSULATION: 4" U.S.G. rock wool above second floor ceilings.

MILLWORK: Special design of clear white pine.

STAIRS: Oak treads, birch risers. Birch railing.

ROOF: Bird handmade asphalt shingles over heavy felt and solid wood sheathing.

GUTTERS: Fir gutters.

SHEET METAL: All downspouts and conductor head copper. Entrance hood Armco iron.

FLOORS: All floors of clear oak over sleepers laid on deadening felt over sub-floors.

LATH AND PLASTER: U.S.G. Rocklath throughout. Corners reinforced with metal lath. Garage ceiling metal lath. Three coats U.S.G. gypsum plaster throughout. Cement plaster in garage and basement.

HEATING: Rudy oil fired winter conditioner with full automatic controls. Bettendorf burner.

PLUMBING: Square tub by Standard, remain-

der Kohler. All fittings chromium on solid brass. Bathroom lavatories vitreous china. Kitchen sink with spray and duo-strainer.

ELECTRICAL: All wiring in steel conduit. Radio antenna in attic and outlets in living room and recreation room.

FIXTURES: Chase brass. Lumiline fixtures in bath No. 1.

WATER HEATER: Fully automatic Par-X gas heater.

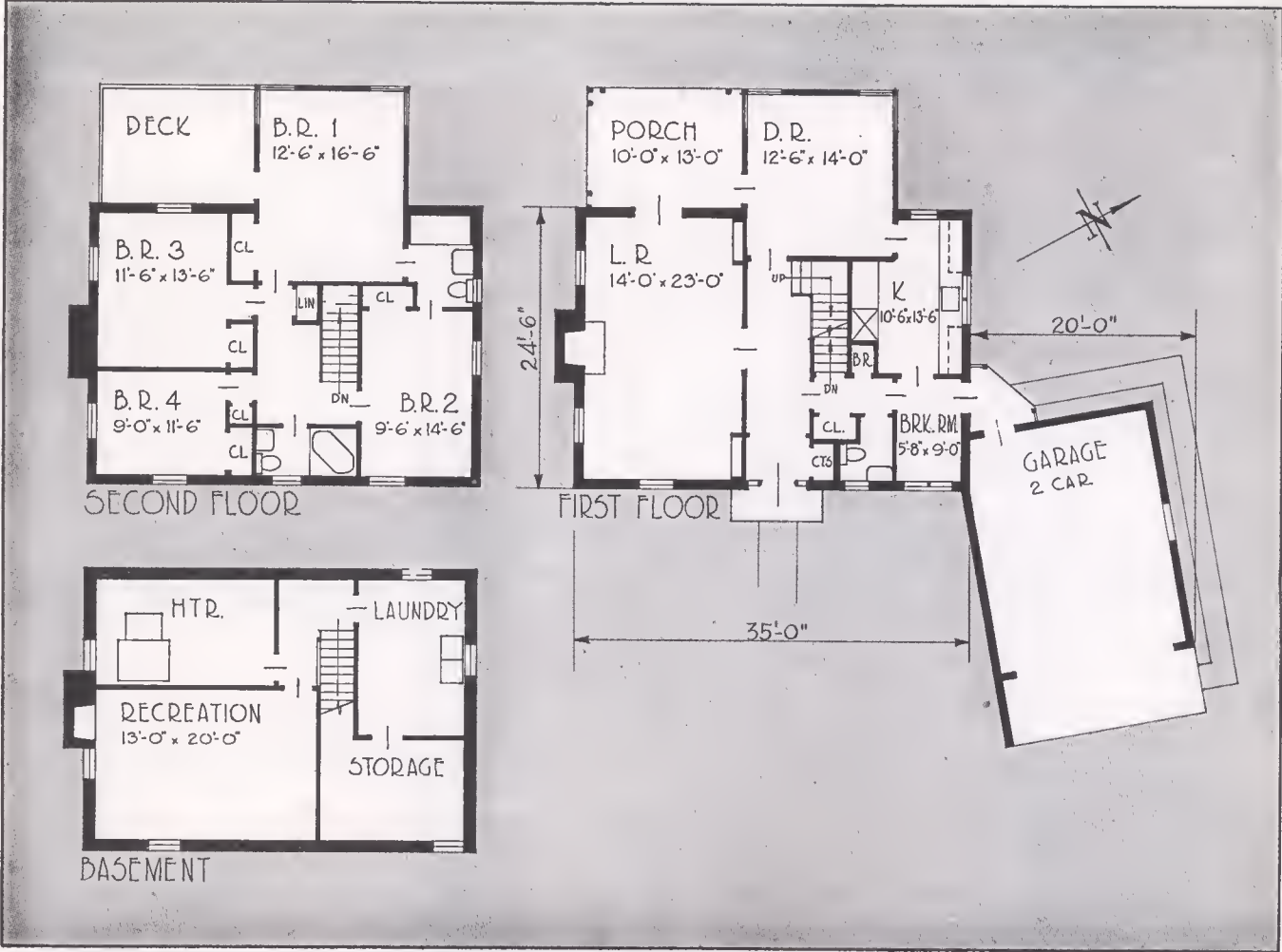
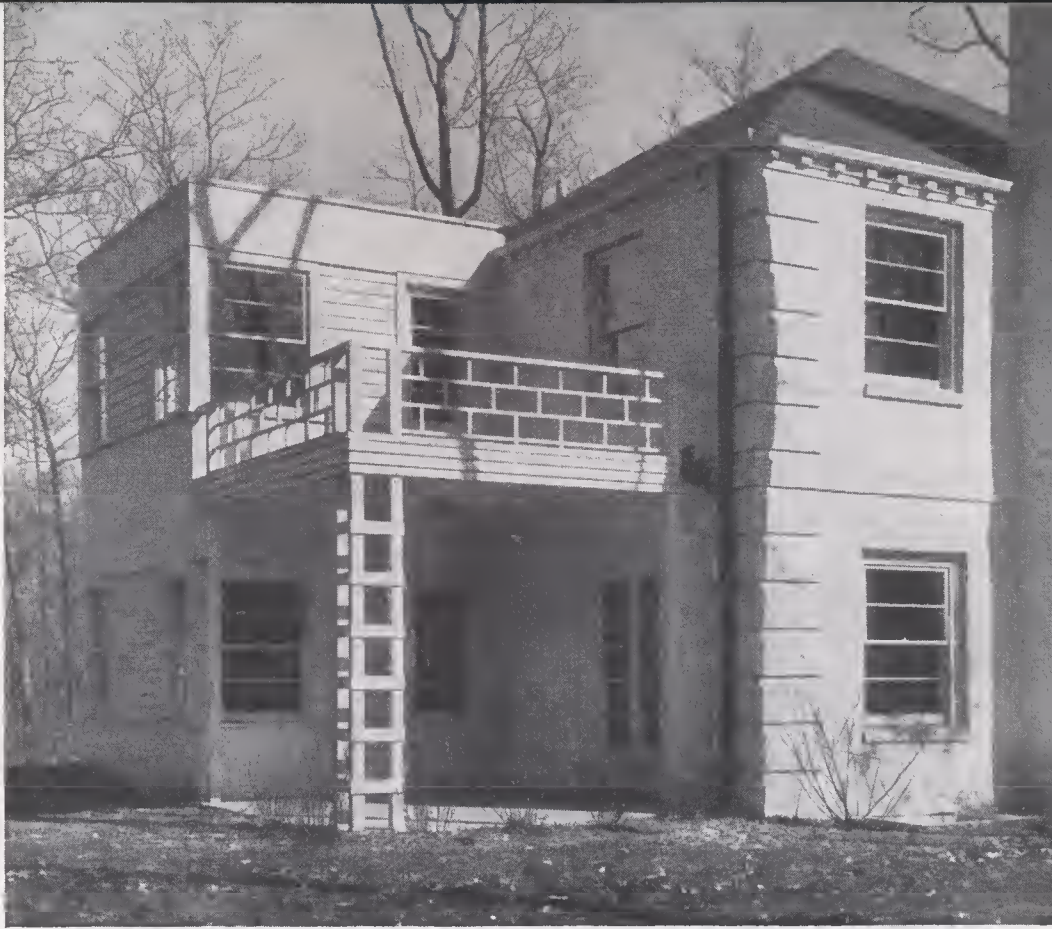
GLASS: Libbey-Owens "A" quality.

WEATHERSTRIPPING: Zinc and bronze on windows and doors. Doors have interlocking brass thresholds.

LINOLEUM: Armstrong with inlaid stripe.

HARDWARE: Sager solid polished brass trim and faces. Stanley steel butts. Chromium plated in baths and kitchen.

THE wooded site of this house overlooks a ravine to the rear and side. Attached garage has been placed to the front and is treated as a service court wall. The principal rooms take advantage of the location—dining room and master bedroom wing, as shown at the right, features four sets of modern corner windows for adequate light and pleasant garden views.





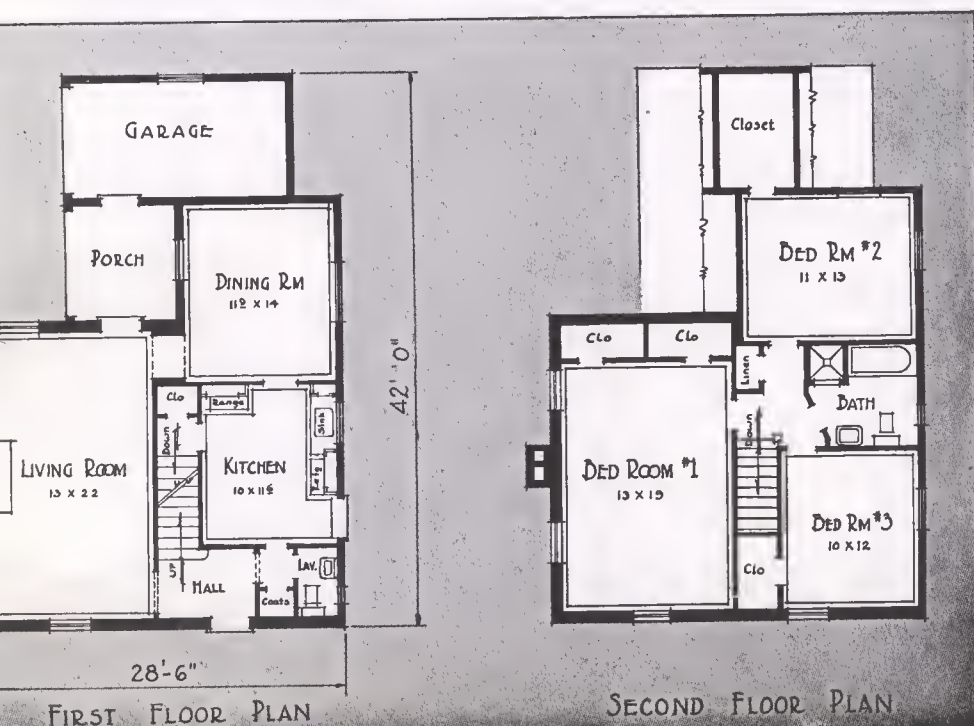
THE PRESCOTT built by Mott Brothers has 6 rooms, bath and lavatory, is designed for a corner lot in a landscaped, garden community.

124

33% Greater Value Than in 1926

STYLING themselves community builders, Mott Brothers of Garden City, N.Y., have created a community that well illustrates the higher values available to the home builder of today as compared with what he could get in the 1926-29 era. Mott's 1938 houses are built to exacting specifications, are unusually well designed by a staff architect, are beautifully and efficiently equipped, and placed in a landscaped garden community in which the minimum sized lots are 60 feet. The Mott houses of 1926

ranked well in the popular esteem of the day, but offer an interesting contrast with the values of 1937. They were on narrow lots, practically all alike, and built from a standard plan with no architectural character. They had none of the 1938 specifications such as copper pipe, metal windows, insulation, oil burners, slate roofs, and shower stalls.





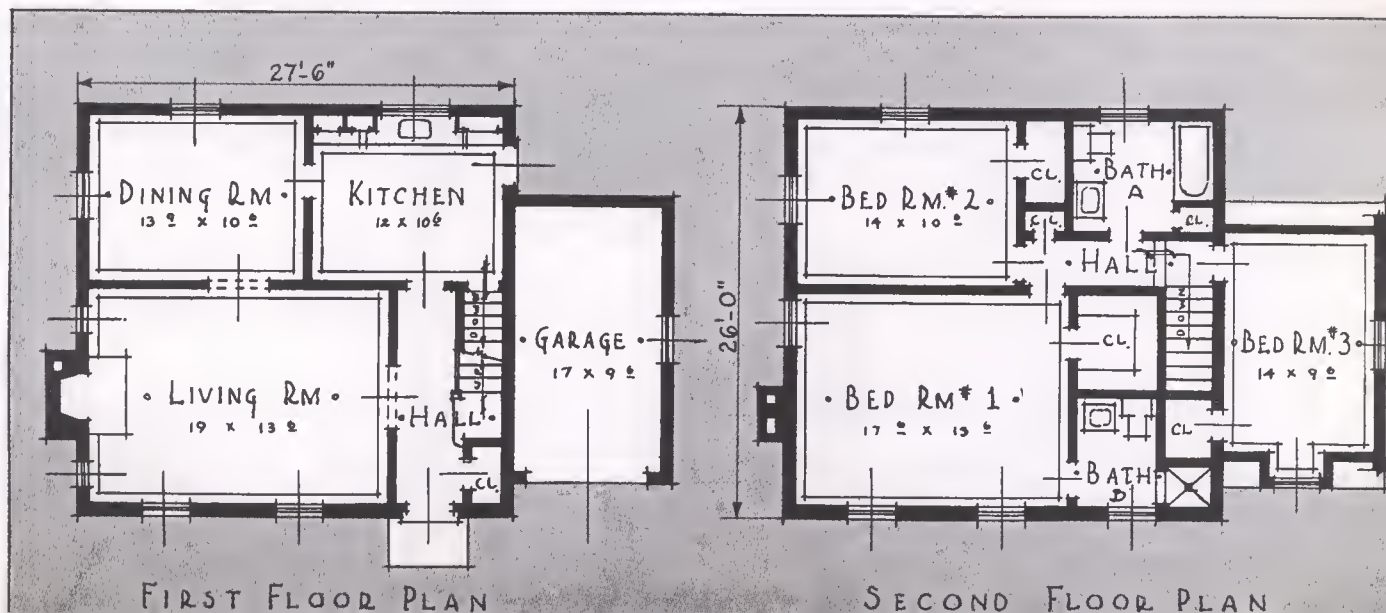
THE DORSET represents unusual value, with two baths, spacious rooms, good construction, a 60-foot lot, fully landscaped.

The two houses above offer a further graphic illustration of modern efficient home planning. The Prescott at left has a big living room with three exposures and an attractive porch at rear. The kitchen is scientifically laid out, convenient to front door and lavatory. There are good closets, good circulation, good exposure in all rooms, with a minimum cubage of only 26,800.

The Dorset, on the right, is another good illustration of the 33 per cent greater value Mott is giving in 1937. With a cubage of only 25,360 feet, this little house has six good rooms and two baths. The bedroom over the garage is reached from the stair landing which is 2 steps

below the second floor level. A commodious front hall provides access direct to the kitchen. The house has an Arco-Petro oil burner with Richvar concealed radiators. The standard Mott specifications also include Standard plumbing fixtures in color, Chase solid brass valves and combination faucets, shower stalls with chromium trimmed glass door, copper tubing for hot and cold water lines with sweat fittings, copper valleys 14" wide with turned edges, Bangor slate roofs, Campbell steel windows, Armstrong linoleum, Thibaut wallpaper, diagonal sheathing, steel I-beam girders supported by steel H columns, rock wool insulation, wood-burning fireplace.

12





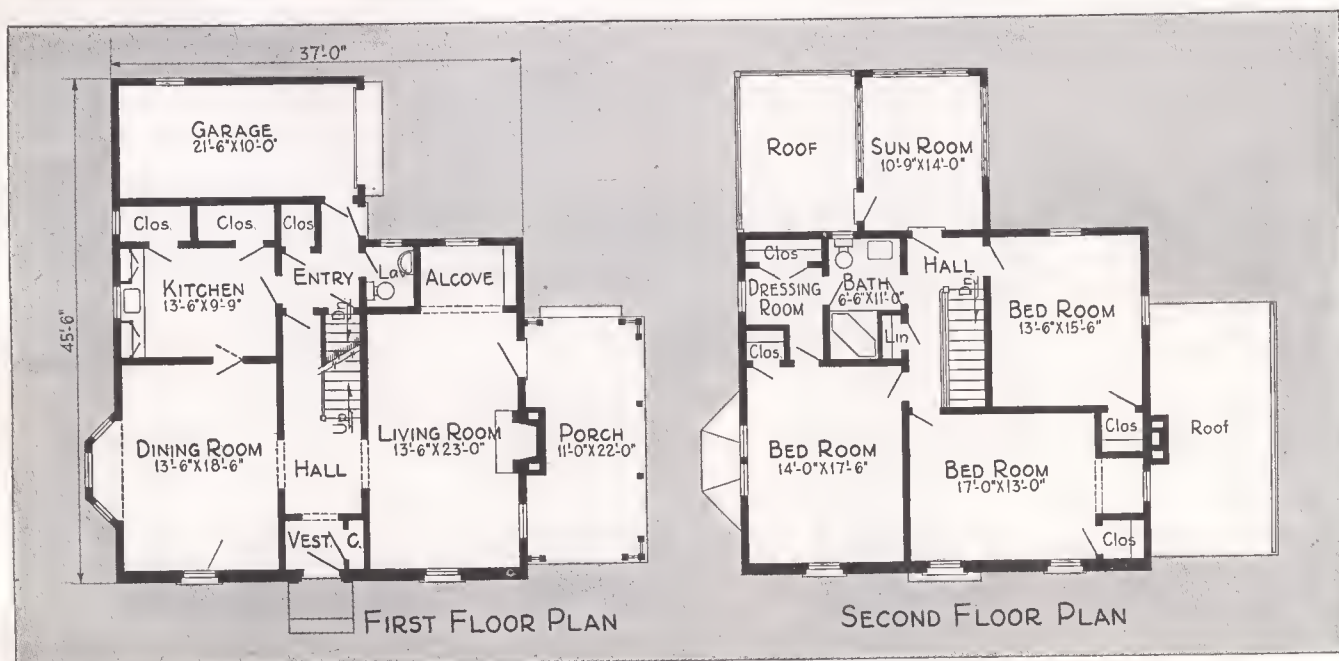
NEW JERSEY COLONIAL HOME OF SIMPLE CHARM

John Decker, Scotch Plains, N. J., Architect

Charles K. Wrage, Dunellen, N. J., Builder

THE SIMPLICITY of the Colonial style and efficiency of the plan are noteworthy in this dignified home. Screened living porch and book alcove off living room are appreciated features. The garage is placed at the rear with direct access to the back entry. Above, half of the sun deck is enclosed and can be used as a heated sun parlor in winter. Copper and brass have been used extensively—

roof is Kenmar copper shingles, 12-inch, 32 gauge, with oxidized finish and 6-inch spacing; plumbing is brass throughout; flashings and leaders are of copper. Clapboard and whitewashed brick, Insulite lath and rock wool insulation, cinder block foundations and oil-fired steam heating are some of the other products used. The house contains approximately 30,000 cubic feet.





FIVE EXTERIOR STYLE VARIATIONS OF HARMON'S "CHATHAM" PLAN

**Built by Harmon Homes, Inc., Chicago, at Colonial Village
Albert Fredric Heino, Chicago, Architect**

Plans and Further Details on the three following pages

BY USING various combinations of materials and styles of design, reversing plans, and relocating entrances so that different elevations face the street, a very limited number of floor plans was necessary to avoid a repetition of similar appearing houses in Harmon's Colonial Village Development, Chicago. Four basic layouts were prepared by Albert Fredric Heino in collaboration with Harmon Company's New York architects.

For each of these plans, four or five exterior treatments were designed. A wide range of materials including stone, brick, siding and shingle allow further variation of appearance through the number of combinations which are possible. As a result there are twenty-seven different exteriors among the thirty-five houses built this year; the few repetitions are not noticeable in going along the street on which most of the houses face. Also the houses are set

back varying distances along a staggered building line to further eliminate the quite frequent monotony found in rows of subdivision houses.

On this and the following three pages the five variations of the Chatham plan are presented. They consist of Colonial type houses which range from Dutch to Early American in style.

The three other basic plans used in the development are known as the Van Boven, the Huguenot and the Roseland. In size they vary from five to six rooms and attached garage, and are built on lots 45 to 60 feet wide, each house being completely landscaped.

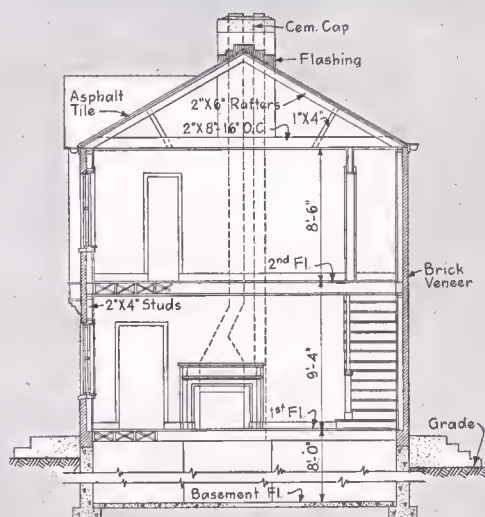
In spite of the relatively high building costs of this area, the prices range from \$7,500 for the Roselands to \$10,500 for the Chathams, financed with FHA insured loans amortized over a period of nineteen years.



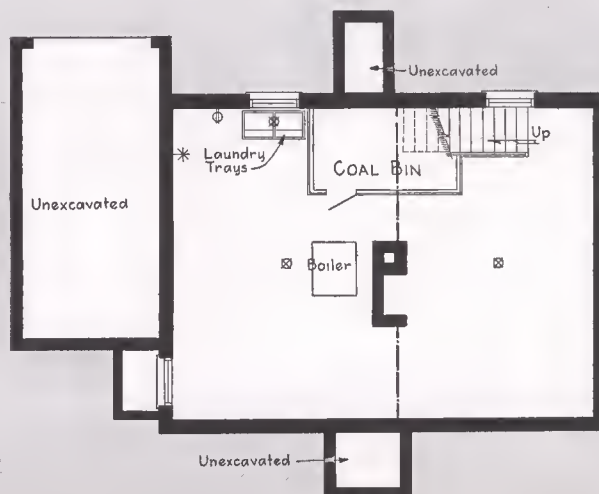
SIX ROOMS AND ATTACHED GARAGE

THESE TWO styles of Harmon Colonial Village houses show the Chatham model with exteriors (above) of stone face below and siding on overhanging second floor, and (opposite page) of unpainted common brick combined with siding. The plans have been reversed so that the garage wings are on opposite sides and the overhang treatment is different but there is practically no change in layout which is shown at the right.

CHATHAM PLANS show a compact arrangement of six rooms and attached garage. A center entrance hallway separates dining and living quarters. Stairs are located along rear wall of living room which also has a wood-burning fireplace. Kitchen has adjoining lavatory, broom closet and built-in cabinets. The third bedroom is over the garage, which as shown in these plans is reached through an L-shaped hall; in the Dutch Colonial style this garage wing is moved to the rear, eliminating this connecting hall. The tub in the tiled bath room is placed in an arched recess. Plumbing fixtures are grouped for economy. Carl C. Anderson and the Gutensky Construction Co., both of Chicago, were general contractors on these houses.



CROSS SECTION



BASEMENT PLAN



OUTLINE SPECIFICATIONS HARMON COLONIAL HOUSES

FOUNDATION: 12" concrete. 4" concrete floor over cinders.

WALLS: Brick and stone veneer; redwood siding or shingles. Framing, Hines Precision Y.P. Diagonal sheathing.

LATH & PLASTER: 3 coat on wood lath.

INSULATION: 1/2" Balsam-Wool in walls and above ceiling.

ROOF: 3-in-1 asphalt shingles, 15 lb. felt.

SHEET METAL: Copper bearing galvanized iron.

FLOORS: Select red oak.

MILLWORK: Gum trim. Pine doors.

WINDOWS: Double-hung wood sash. Unique sash balances. Galvanized weatherstripping.

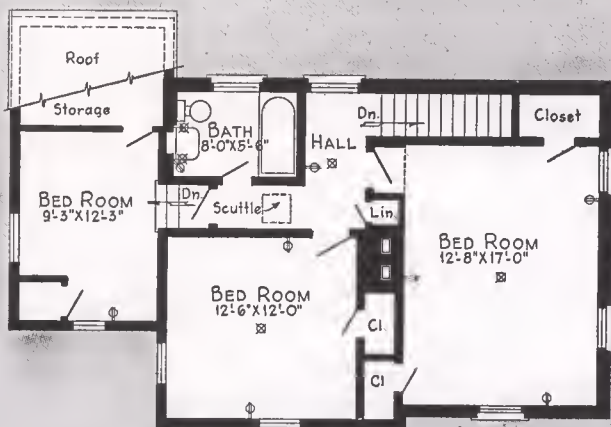
WALL FINISH: Wallpaper except 2-coat enamel on walls and ceilings of kitchen and bath. Tile wainscoting in bath. Other ceilings calcimine.

EXTERIOR PAINT: Devco-Raynolds 2-coat white.

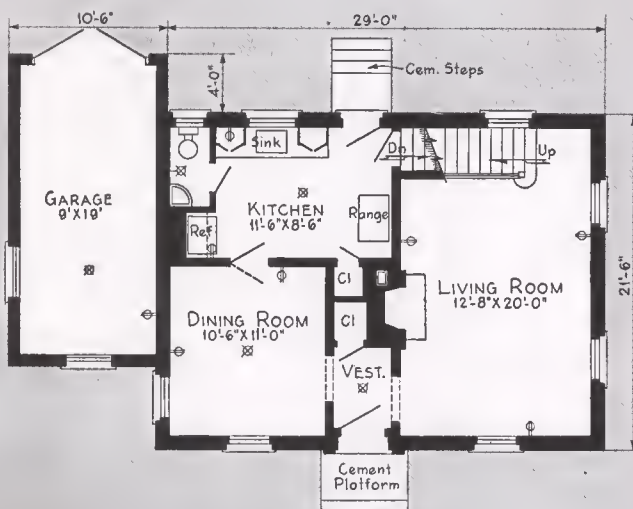
HEATING: Sunbeam winter air conditioning, coal-fired. Gas water heater and 30 gal. tank.

PLUMBING: Kohler and Crane fixtures. Galvanized steel water supply lines.

WIRING: Flexible conduit system.



SECOND FLOOR PLAN



FIRST FLOOR PLAN



HARMON COLONIALS— DUTCH and AMERICAN

Plans and Details on the three preceding pages

THE DUTCH Colonial variation of Harmon's Chatham plan shown above is probably the most attractive of the five styles in livability and appearance. The garage being to the rear, a porch has been added off the living room. Corner window treatment is effective. The fifth type of Chatham appears below. It has a hip roof both on the main section and garage wing.



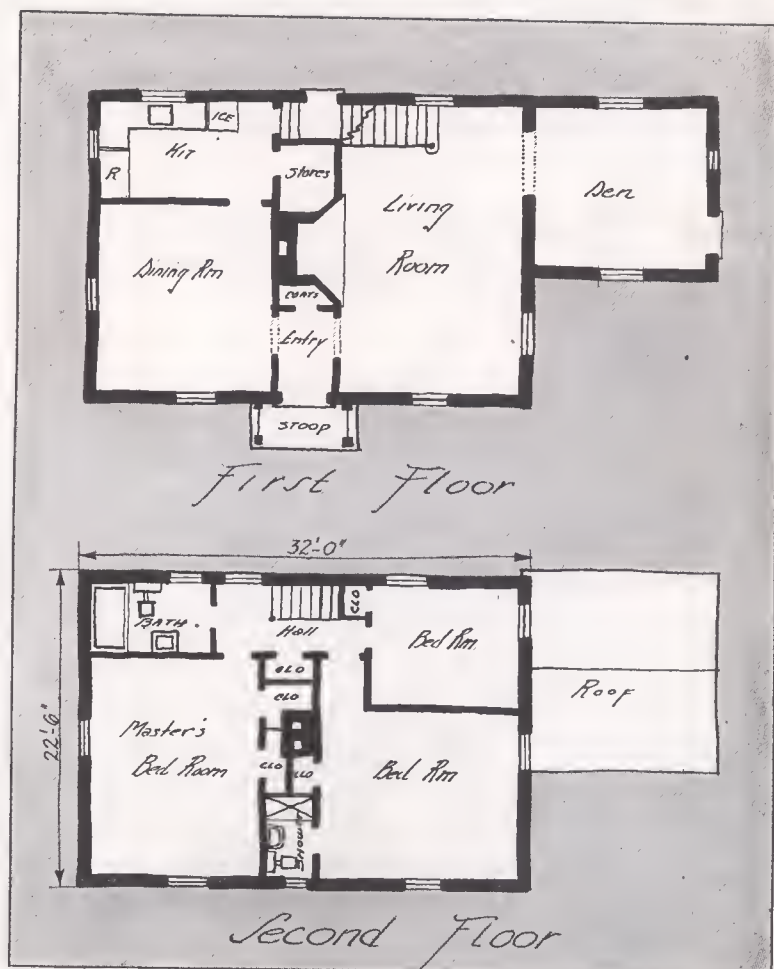


Photo by H. Bagby

AN OLD BRICK HOME IN OLD VIRGINIA

OLD BRICK is used in this charming home built in Richmond, Va., by Matt P. Will, from plans by Architect A. L. Kidwell. The house has a compact, livable plan, with center hall entrance and huge fireplace popular in Southern Colonial homes. The roof is of a new type concrete shingle that looks like wood.

EQUIPMENT INCLUDES 2 good-sized baths, an electric range and refrigerator, Iron Fireman coal stoker, concealed radiation, Insulmesh lath. Cubage is 23,028 cu. ft.





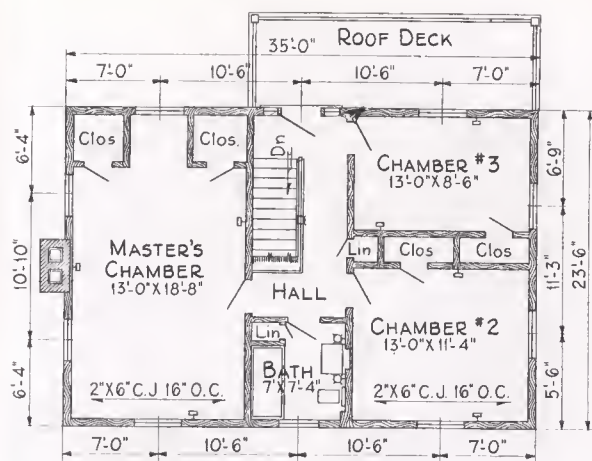
COLONIAL WITH 2-STORY PORTICO

**Built by Ryan Bros. & Sather, Elmhurst, Ill.
Edward E. Baird, Des Plaines, Ill., Architect**

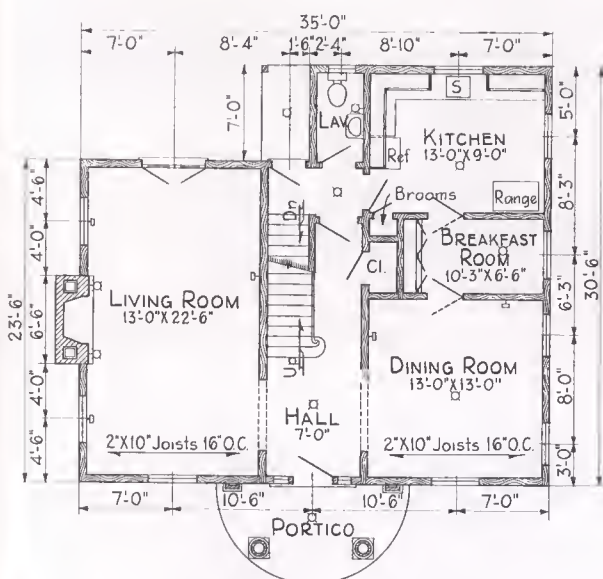


A HOUSE that would appeal to a person who likes the Southern Colonial type of home with a tall columned portico is shown above. Although this feature does not add to functional purpose of the plan, there are those who will admire the effect which bright light and deep shadow give to the front. A house similar in plan and exterior except for the entrance porch appears at the left; it was also built by Ryan Bros. in the same suburb. The portico added about three per cent to the total construction cost.

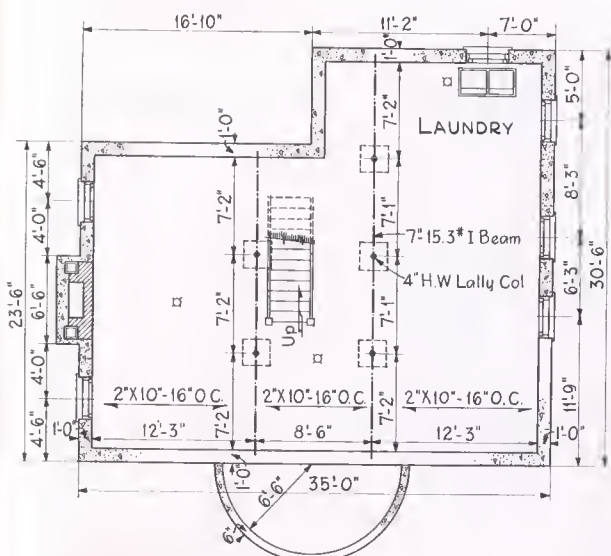
A center hall plan presents an uncrowded, well lighted and ventilated interior. However, the house has been kept to a 35-foot width and space is used efficiently. A small back service hall connects kitchen, lavatory, grade entrance, front hall and basement stairway; the latter can give direct access to a recreation room. A breakfast room with wall cases is well placed between kitchen and dining room. On the second floor there are three bedrooms having ample closets and a bath. A rear roof deck is reached from the hall.



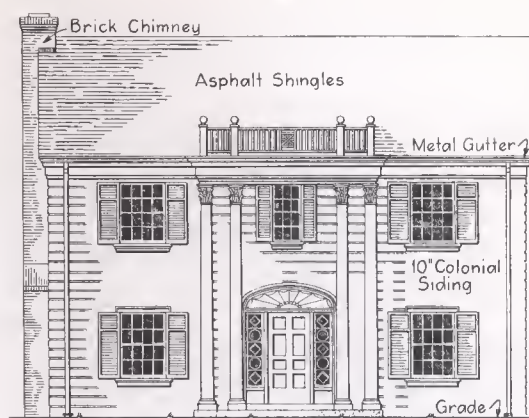
SECOND FLOOR PLAN



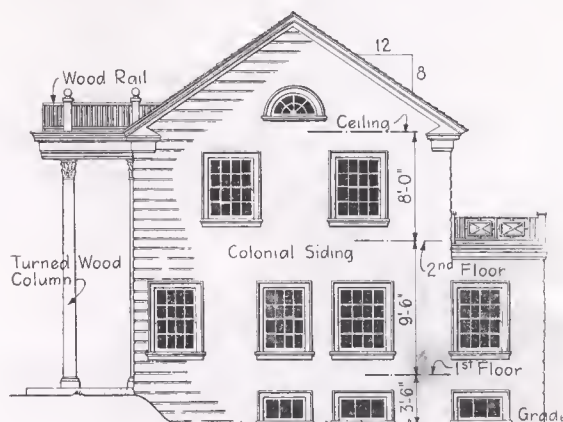
FIRST FLOOR PLAN



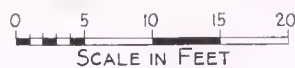
BASEMENT PLAN



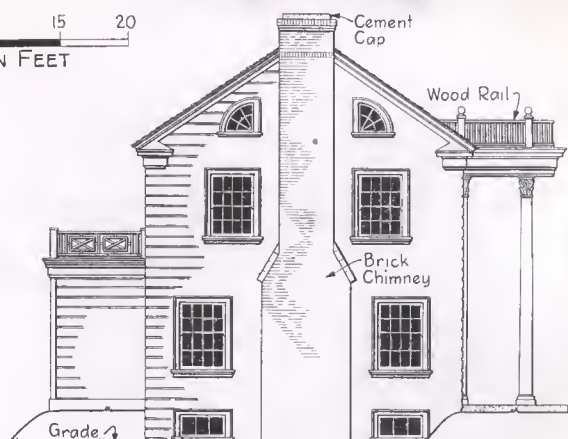
FRONT ELEVATION



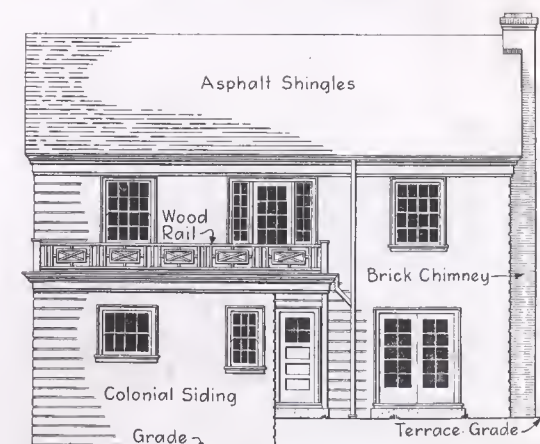
RIGHT SIDE ELEVATION



SCALE IN FEET



LEFT SIDE ELEVATION



REAR ELEVATION



DESIGNED FOR ENTERTAINING

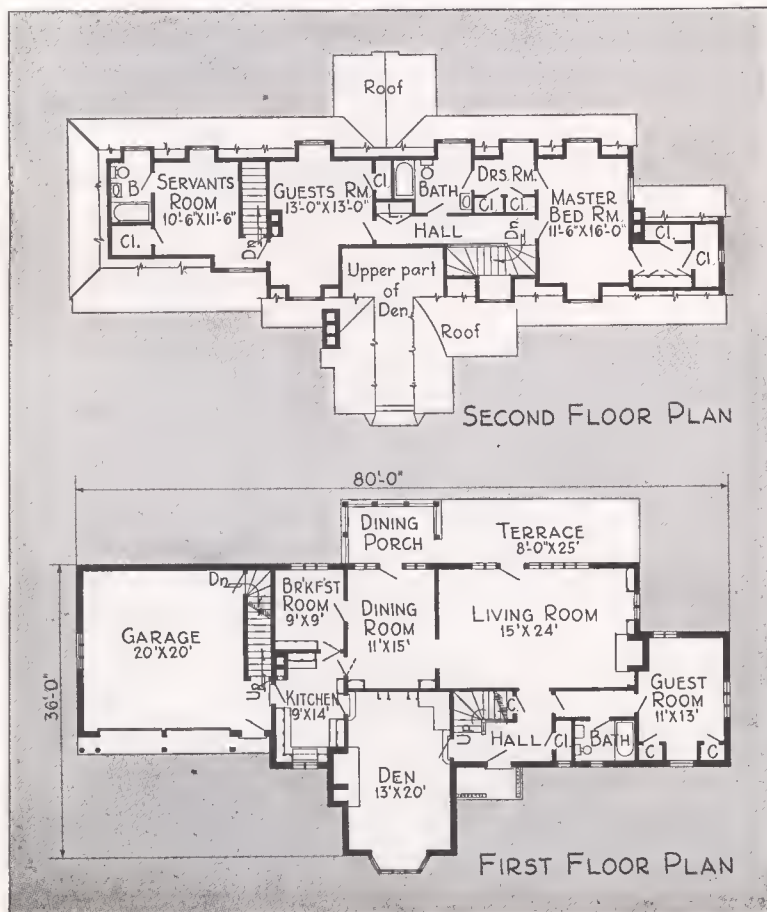
Home of Mr. and Mrs. Charles C. Theis, Wichita, Kans.

Butler and Rochester, Wichita, Architects

M. R. Stauffer, Newton, Builder

THIS English Cottage type house was designed for the home entertaining needs of the owner, who operates the radio station KANS in Wichita. For entertaining he uses the den which is situated close to the front entrance and also near the kitchen for convenience in serving. The den has been made spacious enough that large dinners may be served in it also, if desired.

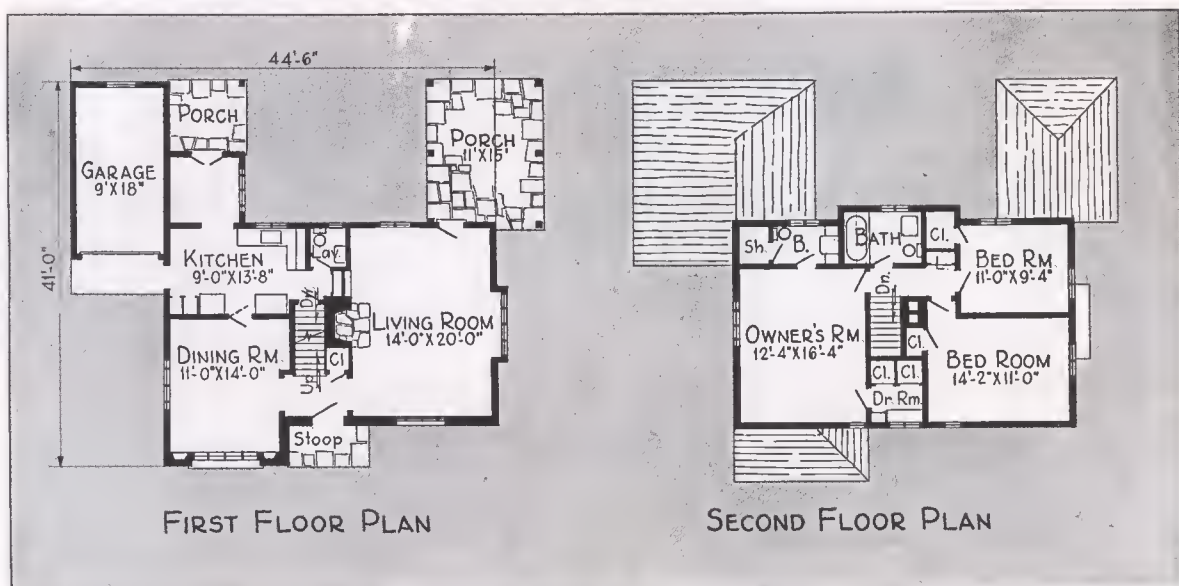
There are nine rooms in this house besides the three bath-rooms, two hallways, and furnace-room, and laundry-room. The two-car garage with overhead doors is at the front of the house and adjacent to the kitchen. The outside finish of this home is brick-veneer; trim painted in variegated rust color; pre-stained shingles of a very dark brown shade for the roof. Interior walls have Idaho white pine paneling, canvas, and paint. The floors are of solid oak planks put down with screws covered with dowel pins and finished with stain and wax. The ceiling beams and all other heavy timbers throughout the building are of solid fir. The kitchen has completely modern equipment, with Armstrong's plain blue inlaid linoleum on the floor and cabinet top: There are two wood-burning fire-places, one in the den and one in the living-room. The spacious windows on the east and south sides of the living-room make a most cheerful room either when covered or not by the heavy draperies. Another attractive feature of the living-room is the placing off center of the fire-place and mantel.





ABOVE: Interior of Den with high ceiling, studio window and wood burning fire place. BELOW: the Living Room in Wichita home of Mr. and Mrs. Charles C. Theis.





CHEELCROFT COTTAGE

ONE of the popular homes of the Cheel Construction Company at Ho-Ho-Kus, N. J., designed by Architect Clarence H. Tabor. It has a livable arrangement, with 14 x 20 ft. living room, downstairs lavatory, breakfast room and a dining porch. The screened porch opening off the living room is another attractive feature.

**Cheel Construction Co., Builder
Clarence H. Tabor, Architect**

The upstairs arrangement with 2 bathrooms, large dressing room and ample closets is good. Specifications include Truscon metal lath and steel sash, Rockwool insulation, U. S. G. plaster, Gar Wood air conditioning, Thibaut wallpaper, Sayre & Fischer brick.



CHAPTER V

MODERNE HOMES FOR ECONOMY



EARLY AMERICAN DESIGN IN BRICK, BOARDS & BATTENS

**Designed and Built by IRVIN A. BLIETZ,
of Chicago—Located in Evanston
For working plans see page 161**



NEW STYLE HOME AT NEWARK, OHIO

Robert R. Cutler, Architect, Newark

Martin Moyer & Son, Contractor, Massillon

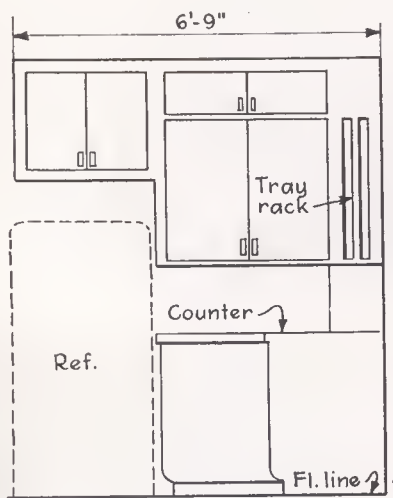
Franklin Southard, Owner

139

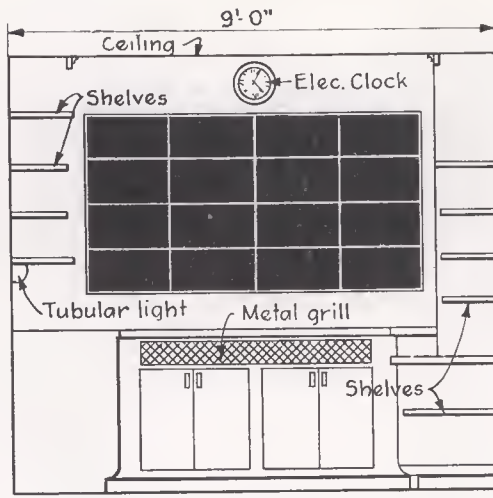
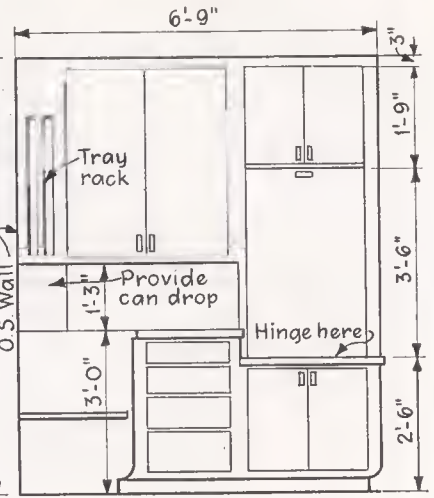
Plans and Details
on pages 140 and 141



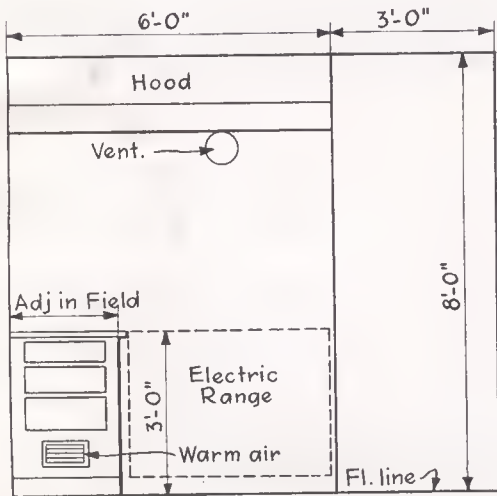
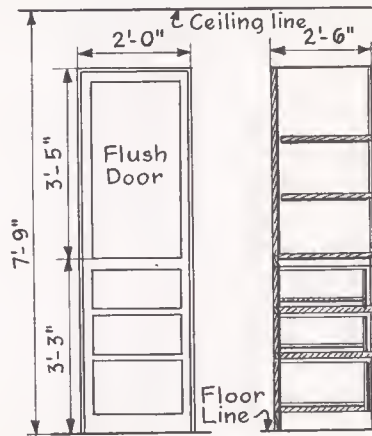
View of the
Living Room



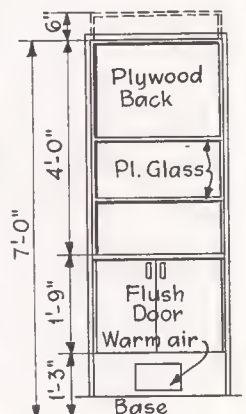
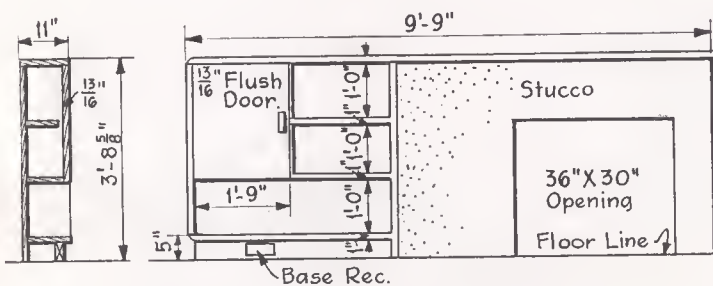
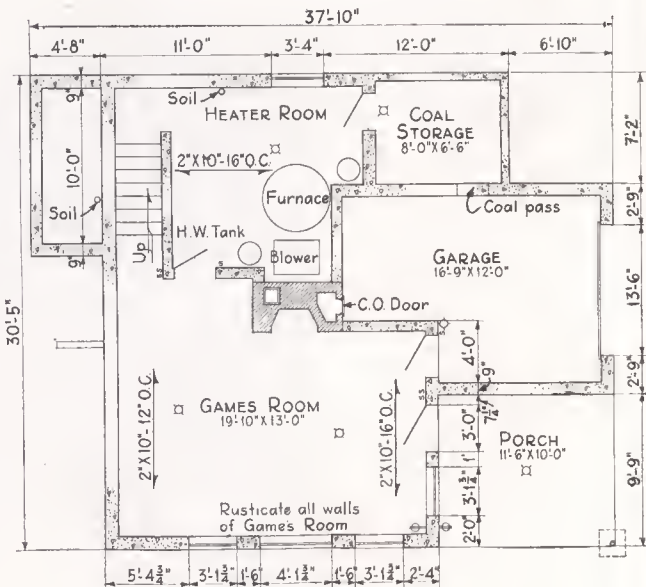
LEFT SIDE

WINDOW WALL ELEVATION
DETAIL OF KITCHEN CABINETS

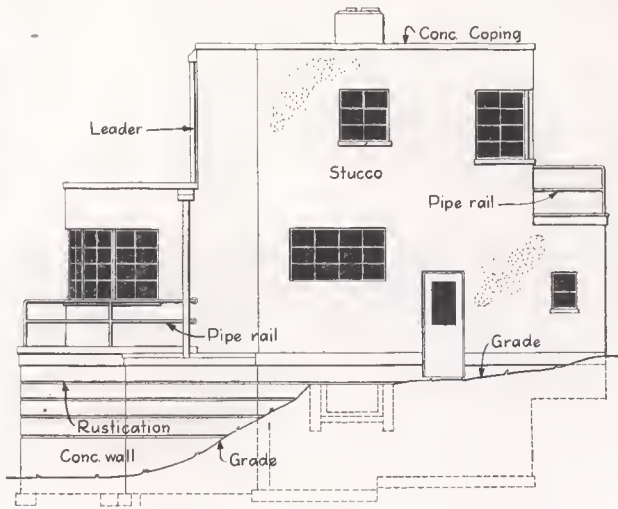
RIGHT SIDE

ELEVATION OF RANGE WALL
OF KITCHEN

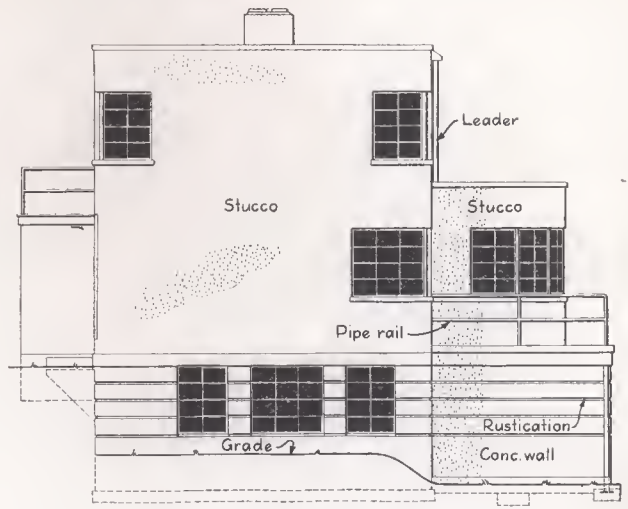
2ND FLOOR LINEN CLOSET

WALL NOOK
DINING ALCOVEDETAIL OF LIVING ROOM BOOK CASE
AND FIREPLACE.

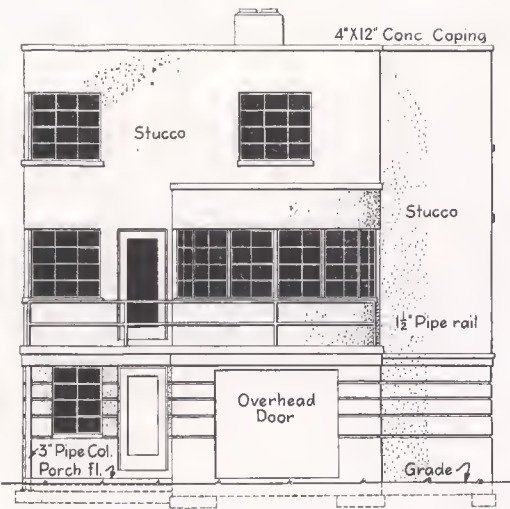
BASEMENT PLAN



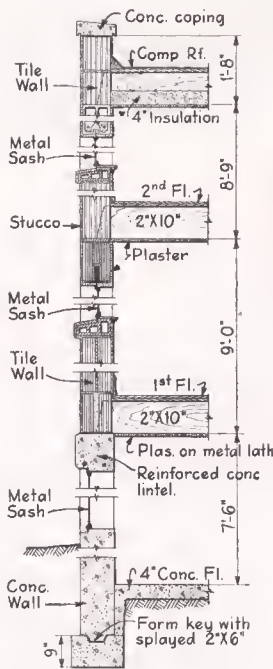
REAR ELEVATION



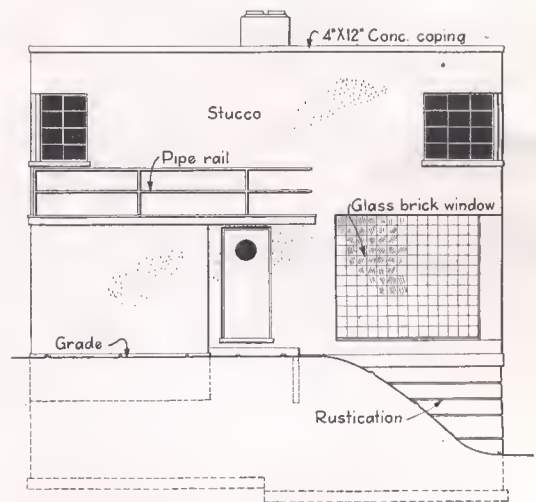
FRONT ELEVATION



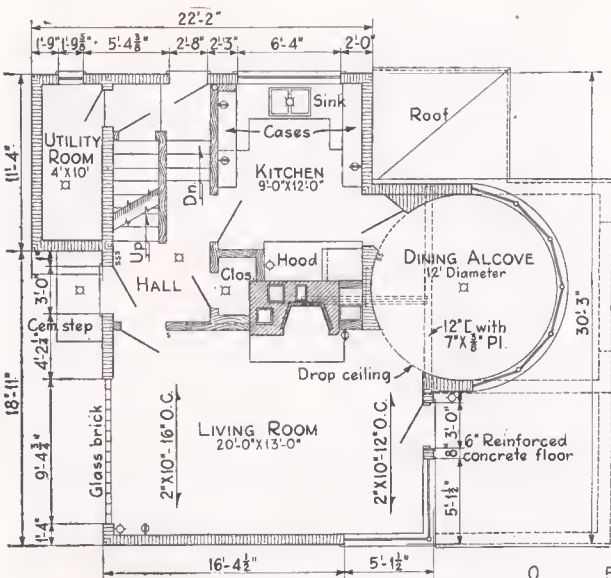
RIGHT ELEVATION



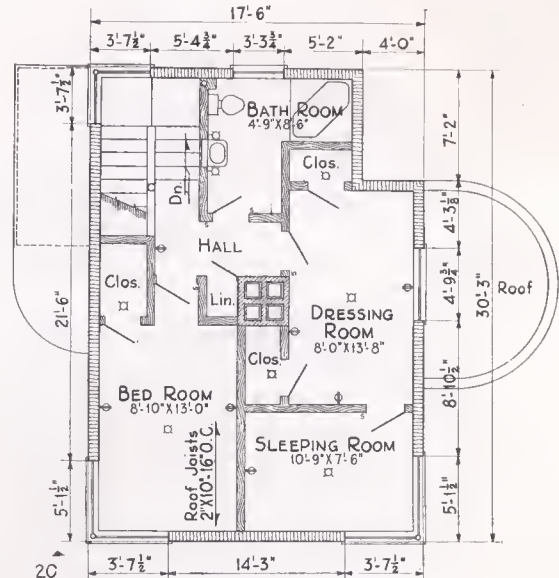
TYPICAL WALL SECTION



LEFT ELEVATION



FIRST FLOOR PLAN



SECOND FLOOR PLAN

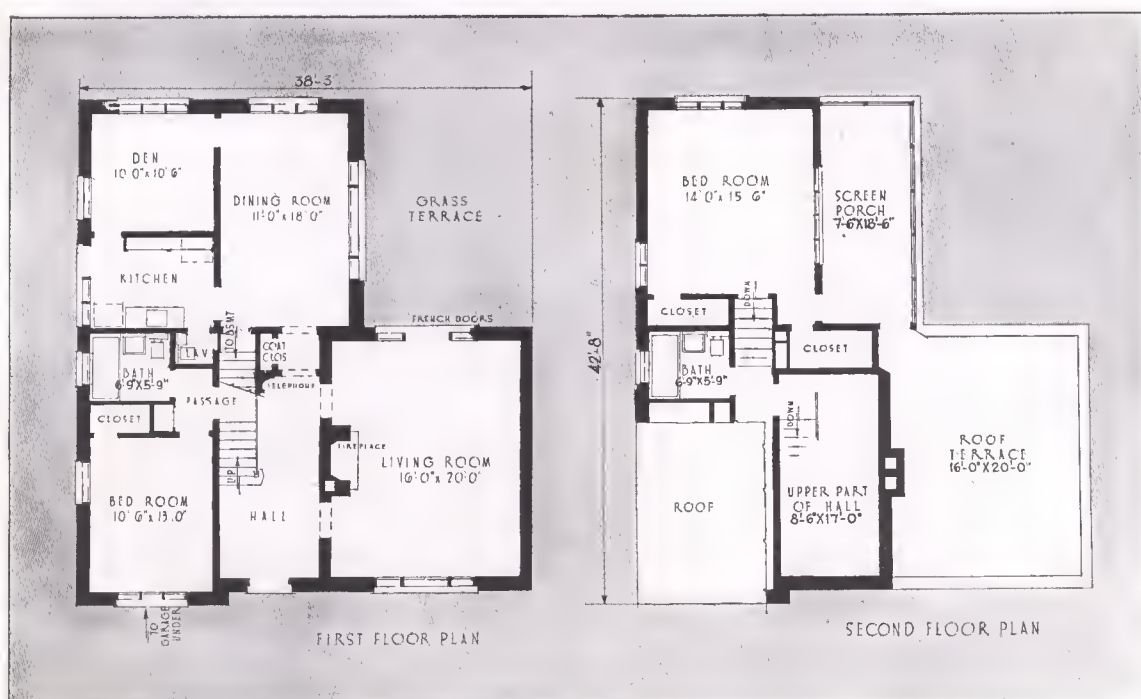


CUBIST CREATION AT GLEN ELLYN, ILL.

Edward McClellan, Chicago, Architect

F. Tomlins, Glen Ellyn, Builder

THE NEW IDEA is embodied in this home of concrete masonry—cinder units—built for Victor M. Henry on Lennox Rd., Glen Ellyn. It presents a face of random ashlar, painted white. The floors are precast joists with poured slab. Partitions cinder masonry plastered. Exterior walls insulated with fibre board on furring strips; plaster applied direct.

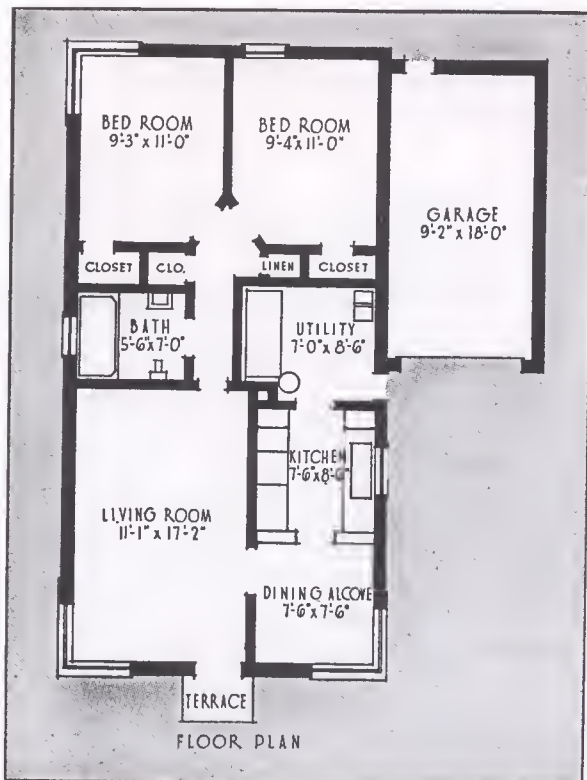




NEW STYLE HOME IN DETROIT

Albert E. Bill, Builder

**This active and progressive operative builder
is finding a ready market for these homes.**



CONSTRUCTION OUTLINE

Cinder Block painted exterior.
Bryant Gas Unit Heater.
Asphalt Shingle roof.
Overhead door on garage, fireproofed reinforced Concrete floor slab.
Sleepers in oak floor.
Plumbing regular Kohler.
Rockwool over ceiling—15 lb. felt in side walls.
Overall size 20'8" x 42'—garage 10' x 20'.
Hardware—nickel on brass.
Light fixtures—modern type.
Foundation—poured concrete 3'6" below surface.
Filled solid with bank sand to floor—to keep out rats, bugs, etc. 2' higher than sidewalk, allows for 12" grade.
Bathroom—fibre tile with chrome metal corners.
Plaster regular wall on Rock lath.
Walls—papered with horizontal pattern.
Flange roof gutters extending 12" on roof.
Windows—Fenestra screen type steel casements.
Bathroom, Kitchen, Dinette floors—Linoleum on cold bases.





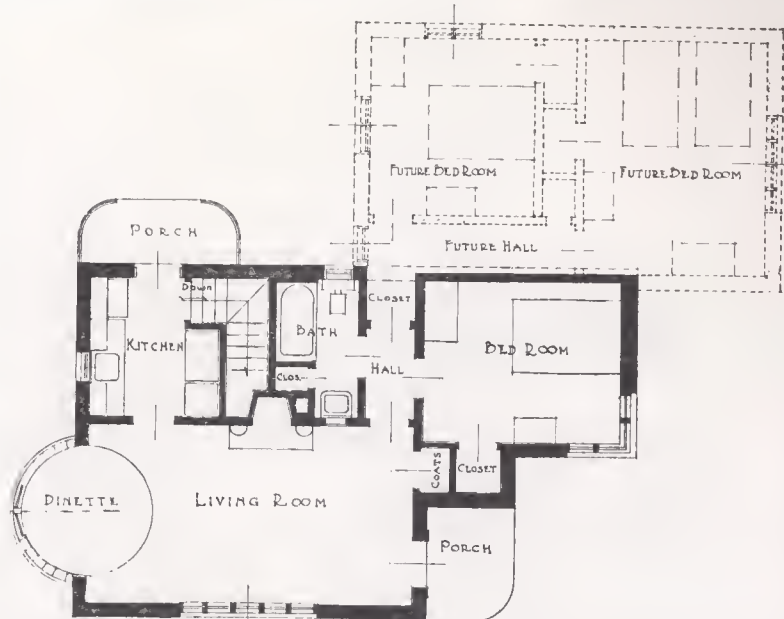
PITTSBURGH "HOME-THAT-GROWS"

Vincent J. Schoeneman, Architect
Albert Fritsch, Builder

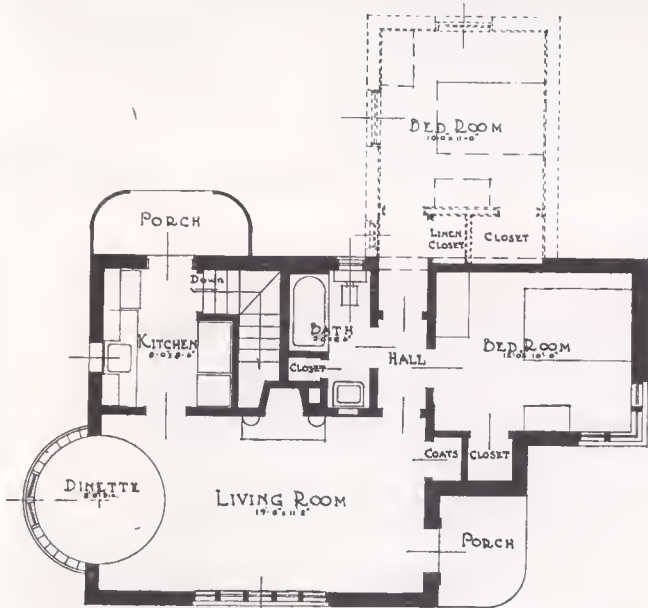
DEDICATED to families of moderate income, a four room, white painted brick dwelling has been built near Pittsburgh as an example of low-cost housing constructed of new and modern materials and incorporating complete electrical facilities. Called the "home-that-grows," because the owner would find it easy to add more bedrooms to the rear, or to a second story top. A flat roof, economical in cost, saves space otherwise lost by using the sloping type. It is well insulated to prevent heat loss in winter and heat infiltration during the summer months.

The "home-that-grows" has a Westinghouse electrically planned kitchen and laundry, complete even to an automatic dishwasher. The kitchen has been so designed that the preparation and cooking of foods may be accomplished with a minimum of effort. It is arranged so that work routine in the kitchen follows a logical and progressive order, eliminating unnecessary steps. The work table surface in the kitchen is finished in light blue Micarta, a laminated molded material developed by Westinghouse engineers as a decorative veneer that resists moisture, acids, alkalis and oils.

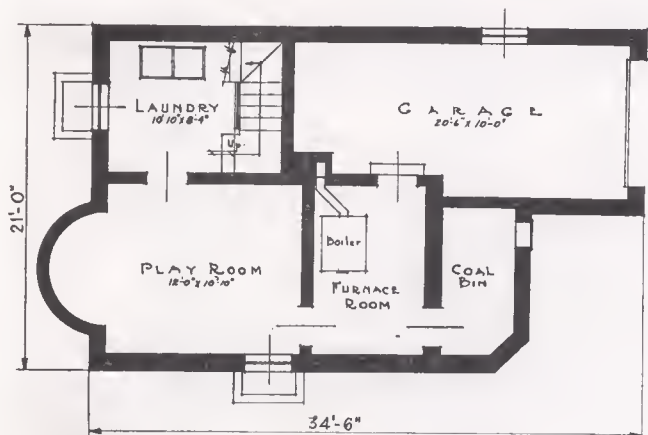




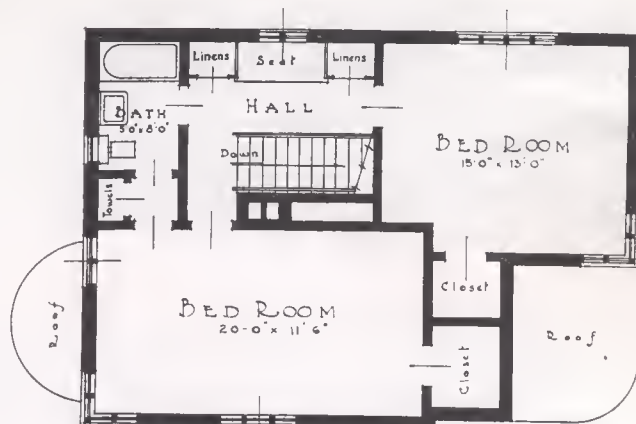
FIRST FLOOR PLAN AS BUILT WITH 2 ROOM FUTURE ADDITION INDICATED



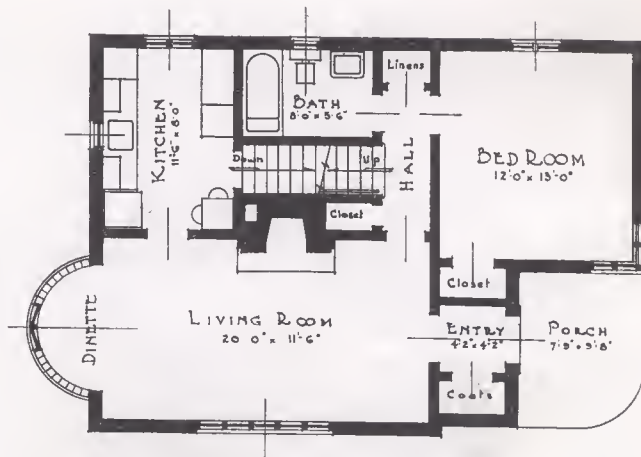
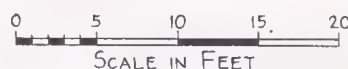
FIRST FLOOR PLAN AS BUILT WITH 1 ROOM FUTURE ADDITION AS INDICATED



BASEMENT PLAN AS BUILT



FUTURE SECOND FLOOR



FIRST FLOOR PLAN WIDENED FOR STAIRWAY TO FUTURE SECOND FLOOR

PLANS show house as built and also future extensions.

The living room is 20 feet by 11 feet six inches with circular bay at one end, forming a dinette. Glass brick, which admits light, forms the circular walls of the dinette. The fireplace mantel is light green Micarta, adding distinction to the room. The bedroom opening from a hallway connecting it with the bath and living room is provided with spacious wardrobe and luminous indirect lighting. The bathroom walls are cream enamel tile which does not craze, crack or sweat.

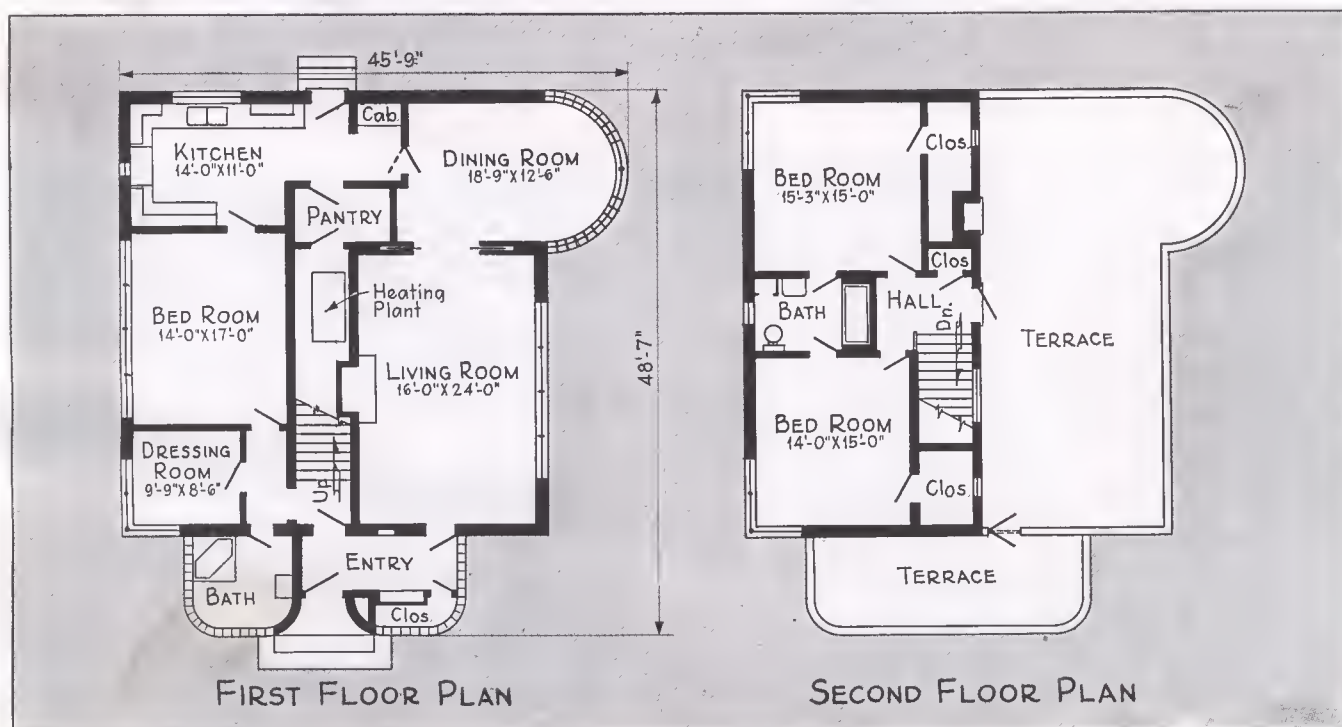
The complete electric planned laundry is bright and cheerful, the logical arrangement of the equipment economizes steps and physical fatigue. The recreation room, 19 feet by 8 feet, is directly beneath the living room. It has a wood-burning fireplace, colored cement floor, which may be waxed for dancing.

A No-fuse Load Center is installed in the laundry which eliminates the need of replacing fuses when a short circuit or overload occurs in the electrical wiring in the home. The No-fuse load center includes small circuit breakers which automatically trip open under conditions which cause a fuse to "blow."



MODERN EFFICIENCY AND STYLE IN TEXAS

Hobart Plunkett, Tyler, Texas, Architect and Builder



Features Extensive Use of Glass Block

TO ASSURE enough interior light on the tree-shaded lot, add a modern decorative treatment both inside and out, and at the same time maintain privacy, large areas of glass block were used in this striking Texas home. The ultra-modern effect is seen in the illustration of entrance and powder room at the right and the dining room bay pictured below. Steel sash are inserted for view and ventilation.

CLEAN CUT exterior styling and a functional plan are shown on the page opposite. All rooms are of generous proportions. A dressing room and bath are conveniently placed for the first floor bedroom. Heating plant is located under the stairs. A large, roofed terrace on the second floor has a wood-burning fireplace and is ideal for outdoor living; the deck floor is covered with quarry tile.

The house has hollow tile walls, stuccoed on the outside and finished with lath and plaster on the interior. Steel beams support upper floor. Standard plumbing fixtures and Kitchen Maid cabinets were used.





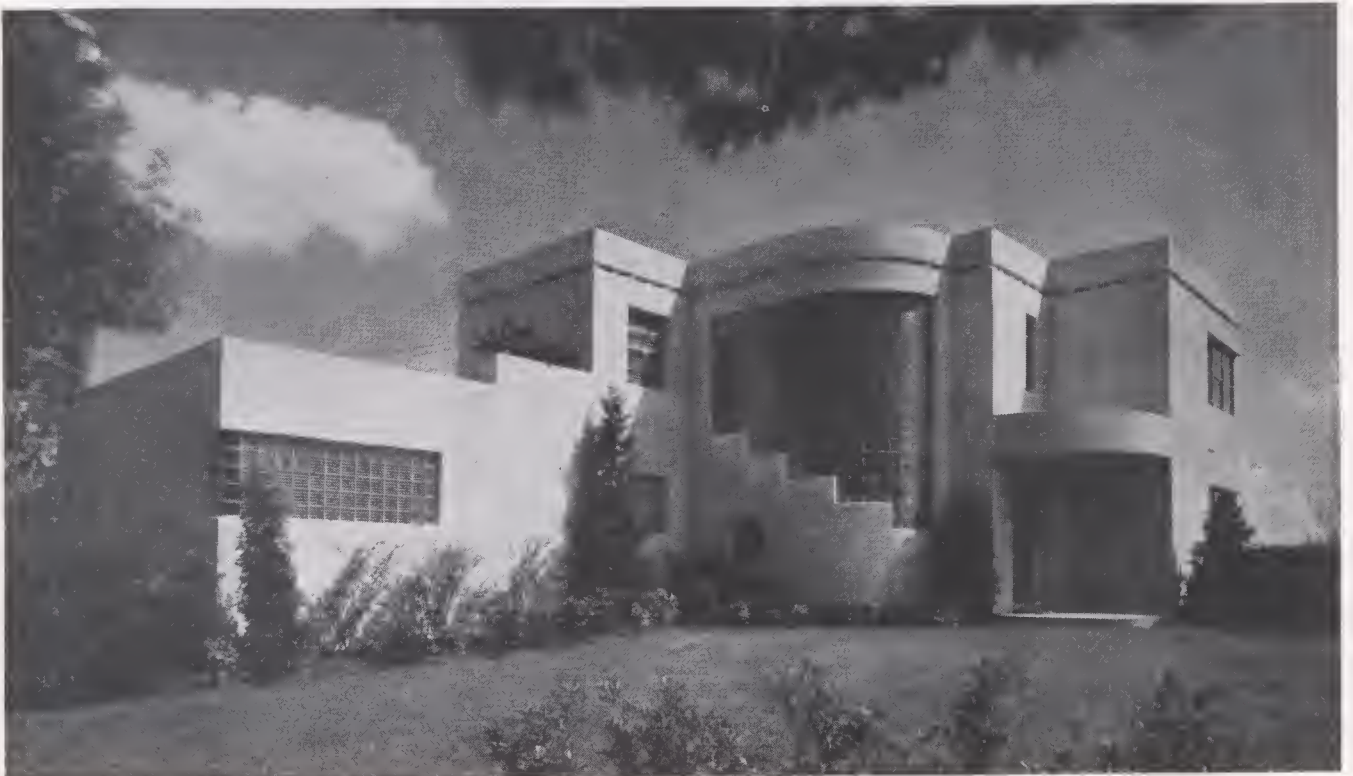
Modern St. Louis Home Features a New Type of Heating System

IN ST. LOUIS, the recently completed home of L. M. Persons, chief engineer of White-Rodgers Electric Company, presents an interesting example of trends in modern design, construction and equipment. Among other features, it has what is believed to be the first year 'round air conditioning system of its kind, a truly remarkable departure from the conventional "air system" with its warm air and return air ducts and trunk lines.

The home was built with the idea of creating conditions and problems with which the heating and air conditioning industry will be faced when this trend toward the use of more modern building materials becomes more pronounced. Further, it provided the White-Rodgers Electric Company opportunity to develop the needed control equipment in advance of the market requirements.

Concrete construction throughout, with generous area of glass brick, unusual indirect lighting systems and ultra-modern appointments combine to make this home a "show-place" for prospective home owners and the local building trades. The use of concrete results in an unusual architectural

ABOVE: The stairway and aluminum railing treatment are typical of the styling in this first modern-designed all-concrete home to be built in the St. Louis area. The view below shows the front entrance and modern handling of large stepped stair well panel of glass block.



beauty, and the best tribute to the whole project is the building of several new homes of similar design and construction on which work has already begun.

Mr. Persons says the air conditioning system installed in his home is designed on the theory that the comfort of almost every person is principally governed by the temperature and humidity around the feet and legs. If the lower parts of the body are comfortable, a person feels comfortable at any reasonable inside temperature and frequently at a lower temperature than is commonly thought necessary.

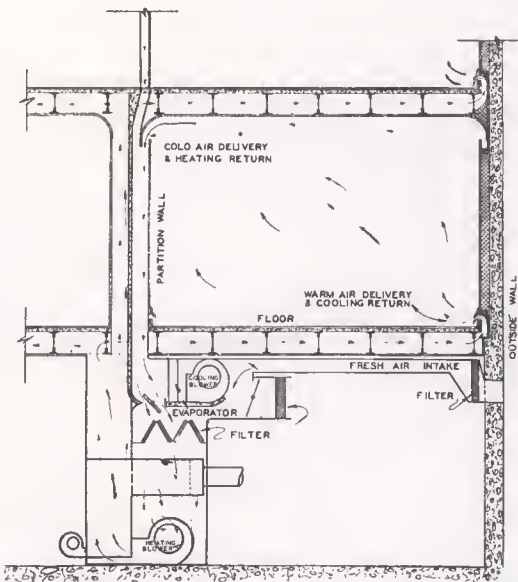
The heating unit in the Persons' home is a gas-fired conditioner of 125,000 BTU capacity with a 1300 CFM blower.

As previously stated, the home is of concrete construction throughout. The floors are not solid concrete

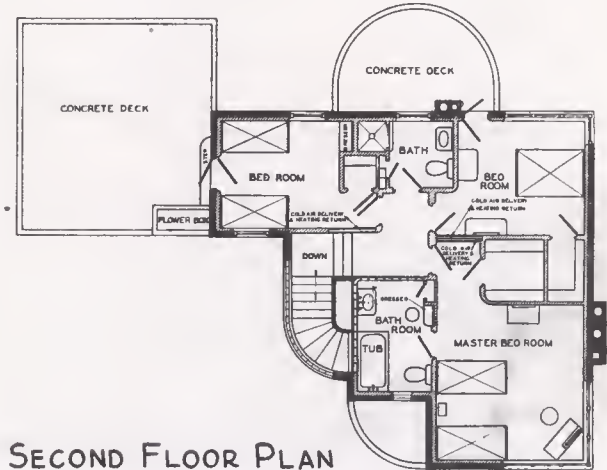
but are built of open web 10" steel joists to permit using the floors for plenum chambers. The bottom of each floor is sealed off with concrete, forming the ceiling surface for the rooms below, and the top of each floor is sealed with a single 3" concrete slab, laid over the joists and forming the floor surfaces. Both floors, throughout the home, are covered with 1/8" mastic tile.

Thus with the floors providing the plenum chambers, the conditioned air is delivered from the top of the unit, through a large duct (much like a pipe-less furnace) directly into the first floor chamber. A large riser 10" wide and 4 feet long, equipped with a splitter damper to regulate the volume of air, is built into a partition wall and provides for air delivery from the first floor chamber to the second floor chamber. (See drawing below.)

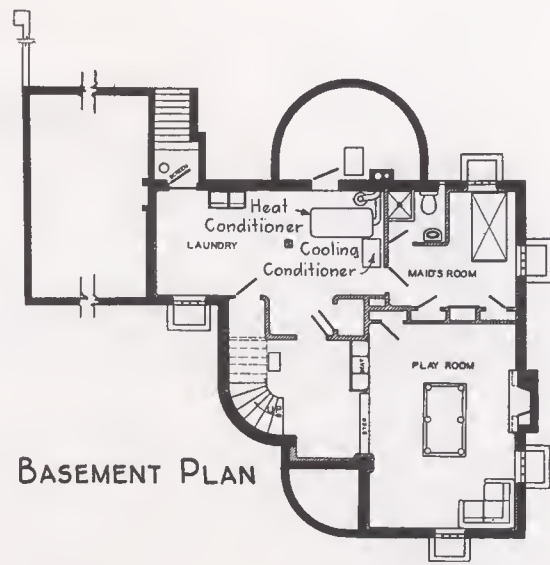
In winter the heated air is delivered into the rooms



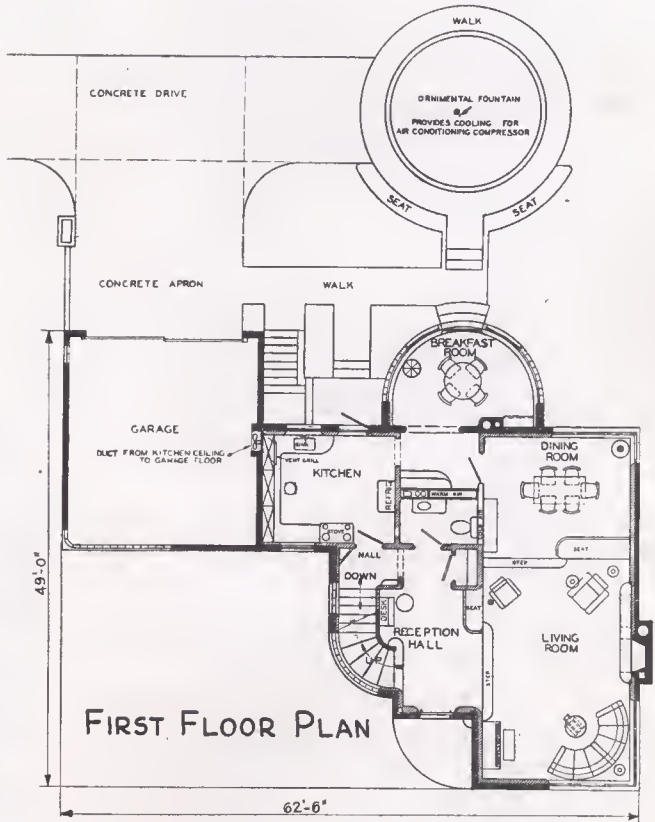
FLOOR & WALL SECTION SHOWING YEAR 'ROUND AIR CONDITIONING SYSTEM



SECOND FLOOR PLAN



BASEMENT PLAN



FIRST FLOOR PLAN



tle to the outlet slots at the bottom.

Total heat loss for this building is only 100,000 BTU, due largely to its unique construction. Concrete slabs that form the floors do not extend to the outside walls, but stop 4 inches from them. This prevents heat loss by conduction, and allows for expansion of the floors. Steel joists, of course, attach to the wall, but the heat loss through them is comparatively small.

Humidity is supplied by a pan-type humidifier in the heating unit.

The living room ceiling is 9 ft., but all other rooms are 8 ft. The house is insulated with 4 inches of rock wool in the side walls and 6 inches in the roof. Above the layer of insulation in the roof is an air space which is vented to the outside by about 300 holes of 3-inch diameter in the side walls. These permit roof heat to be carried off in the summer and lower temperatures in the upstairs rooms.

The house is tastefully decorated throughout, and furniture and fixtures are entirely modern. Lighting effects through indirect lighting can be varied at will through a panel board.

Summing up his theories on comfort, Mr. Persons says, "We must learn to condition the lower part of our rooms and take off the warmed air as it rises to the ceiling," and certainly he has put his theories into actual practice very effectively in his new home.

LEFT: Living room is two steps below first floor level with dining space beyond. Kitchen is planned for efficiency and attractiveness; windows on opposite sides provide cross ventilation. Below, semi-circular breakfast room with large window area is bright and cheerful.

through slots in the wall and located 6" above the floor level. These slots are 1" wide by 15 feet long and are curved to deflect the air down toward the floor. The large area of these slots admits the incoming air at such low velocity that air movement is imperceptible.

Return air outlets are provided in a "cove" or gutter-like depression in the walls, near the ceiling and at a point about where picture molding would ordinarily be located. The concealed lighting equipment is contained in this same "cove" and the return air openings are just as effectively concealed as the lighting equipment.

The floors of the house contain 40 tons of concrete. On a zero day outside, floor temperature will reach 80° to 85°. Incoming air will be around 75°. Ceiling temperatures run around 70°. Due to the large bulk of concrete in the floors it is necessary to operate the heating unit about 24 hours from a cold start to bring up floor temperatures to the comfort point for occupants of the room. However, this condition never exists in actual practice, as a home of this type is always maintained at nearly constant temperature and humidity the year 'round, with a minimum of 70° during the heating period, and a maximum of 80° during the cooling period.

Summer cooling equipment in the Persons' home employs a three ton refrigeration unit. The direction of air flow is reversed through the system in summer, bringing the cool air in at the top of the room and letting it set-



A STUDY in basement steps that would hardly be believable if the camera did not say it is so. Decorative insulating board gives the modernized stairs that attractive look. The work was done by Home Remodeling and Building Company of New York, from plans by Architect A. E. Klueppelberg.



New Homes Inspire Old-Home Remodeling

**Suggesting Attractive Building and
Modernizing Motifs**



A CLEAN, modern laundry replaces the basement jumble shown below in this New York City job by Home Remodeling and Building Company. A. E. Klueppelberg was the architect.



No Less Than "AMAZING"

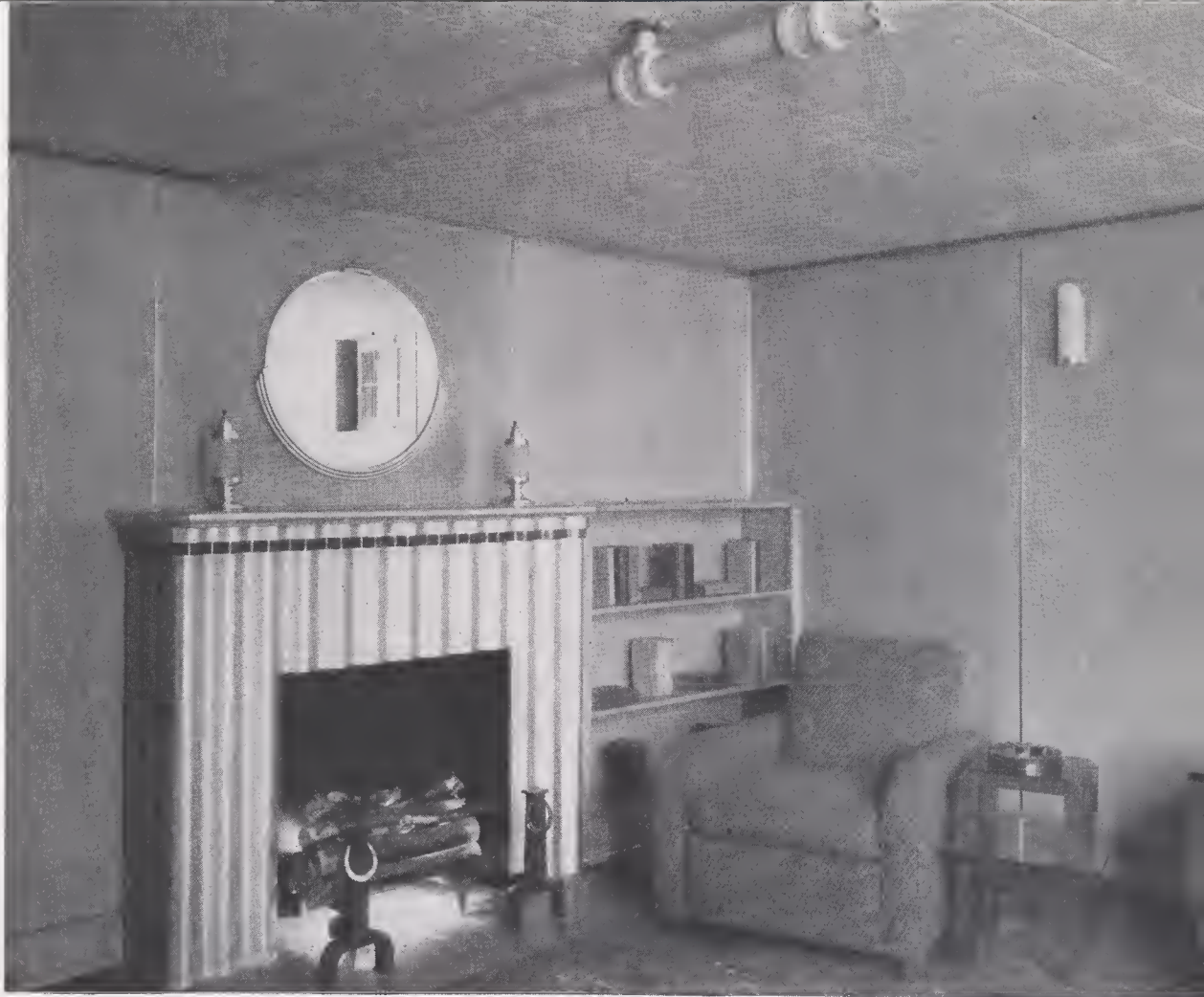
Two Basement Transformations

WHAT a smart builder and architect, working with modern materials, can do to transform useless basements into attractive livable rooms is beautifully illustrated in the accompanying pictures. The laundry, above, is in the basement of an enterprising mortician in the Bronx, New York City. He had a pressing need for additional space. The pictures show better than words the results he achieved, thanks to the work of Architect A. E. Klueppelberg and the Home Remodeling and Building Company.

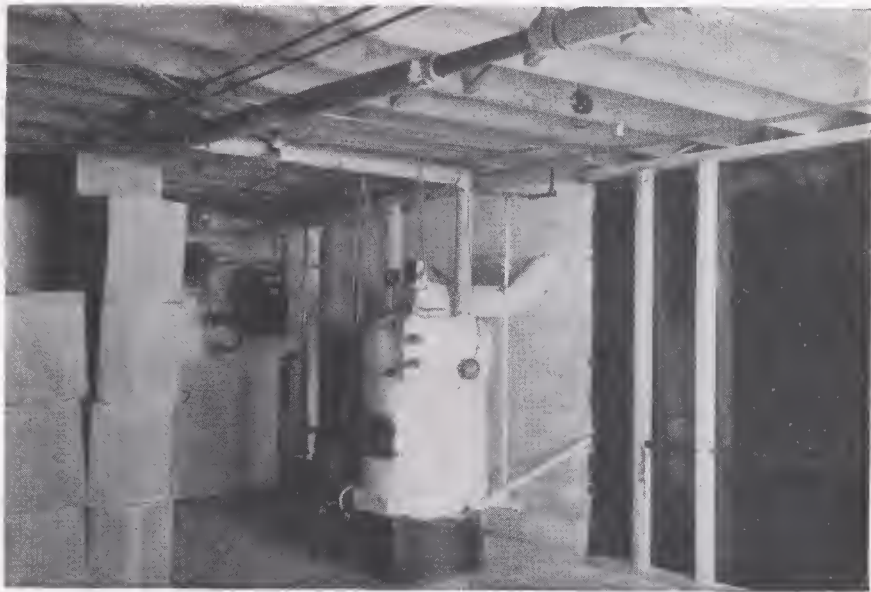
Studding were erected against all of the outside walls. These were cross furred to permit an even, substantial backing for Johns-Manville Decorative Insulating Board which was then applied. The insulated walls

furred out in this fashion provided a warm comfortable room. Pipe covering was removed to provide heat, and the pipes were then painted. The old window was given an attractive casing and new inswinging casements installed. Linoleum on the floors, plus a little simple wood work and clean paint did the rest.

The attractive modern basement on the page opposite was done by the Quality Improvement Company of Freeport, Long Island, from plans by Architect William Morrison. This is the basement of a typical 6-room bungalow, and the "before" picture, showing the heating plant, is typical of many such basements. The young couple that owned the house needed additional entertainment space. The first step was to water-



THE BEFORE and after story of an amazing basement transformation is shown on this page. Walls were water-proofed, and packed with insulation, then covered with asbestos Flexboard. The fireplace is built from corrugated Transite. The modernized ceiling is of insulating board, and the concrete floor is covered with asphalt tile.



proof the masonry walls as indicated in the "before" picture. Two by four studs were then erected, and the 4-inch space filled with J-M Ful-Thick Rock Wool. A partition was built, cutting off the heating plant. Full size sheets of Asbestos Flexboard were then applied and the joints covered with a narrow metal molding. Cross furring was applied to the ceiling joists and Decorative Insulating Board Tile applied. The old pipe covering was removed and the pipe given a coating of flat paint to match the buff color of the insulating board. With the basement walls thoroughly insulated in this fashion, the heating pipes kept the room very comfortable during cold weather.

The fireplace was built of Corrugated J-M Transite, and an attractive bar was built at the other end of the room by curving standard Flexboard around wooden supports.

The old basement sash were removed and placed on the outside to act as storm sash. New inswinging case-ment sash of much more attractive appearance were then installed. The concrete floors were covered with Asphalt Tile and attractive modern lighting fixtures were installed. The result is an extremely attractive 24 by 26-foot entertainment room for the O'Hara family and their many friends which adds immensely to the value of this property.



CHAPTER VI

SAVINGS IN GROUP HOME BUILDING



Group Home Planning Cuts Cost and Increases Values

Irvin A. Blietz, Chicago, Demonstrates Advantages of Related Planning Used in Six Houses He Recently Completed

LARGE scale community planning projects which have been successfully developed over a period of years have established the benefits of group building where the units are co-ordinated. On the other hand, many streets of homes individually built show no thought as to the proper relation of each house to the neighboring property. All too frequently a house is erected between two present structures which not only clashes in exterior design but also cuts off light and air from its neighbors and thereby decreases the value of all three.

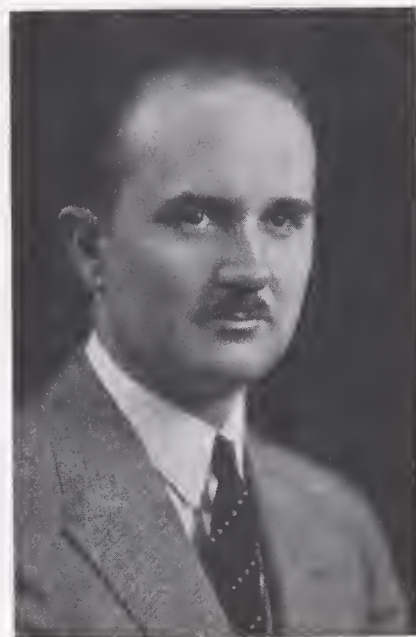
The group of six modern homes illustrated above and recently completed in Evanston, Ill., by the firm of Irvin A. Blietz, Chicago builders and designers, demonstrates the advantages of related planning on a small scale to produce greater and more stable housing values.

The property on which they were erected is in a built-up section of this North Shore suburb and consisted of a plot about 265 feet front by 180 feet deep which had been divided into five 53-foot lots. A central location, together with numerous oak trees, made the site very desirable but likewise increased the individual lot cost to a figure out of proper proportion to the value of the type of house for this site which the surrounding property would warrant.

To overcome this, the plot was redivided into six 44-foot sites. Then the problem, as Mr. Blietz has expressed it, was one of "planning so that each house would have as much light and air as has the average house on a fifty-to sixty-foot lot, and trying to get the biggest house value in living area that each dollar would buy without sacrificing quality."

How the houses were designed and placed on the lots is illustrated in the plans on the opposite page. The builder formerly did extensive work in the apartment building

IRVIN A. BLIETZ, Chicago, builder of the attractive group of houses above.



field and consequently has a background of experience in assembling living units. The houses are planned so that, although only 5 feet from the side lot lines, the attached garages are staggered to give an open area between and practically all main rooms have one open exposure to the front or rear. Mid-winter photos above show that sunlight reaches southern side elevations:

Building line is 50 feet from the sidewalk which in turn is 40 feet inside the curb and the distance to the rear lot line from the back of the houses averages about 100 feet, so there is a broad expanse of yard in either direction. A further point of interest is the way in which advantage was taken of the fine oaks in placing the houses.

Mr. Blietz believes that houses should be of similar type in such a development, but that each should be different in character. The Early American and Colonial styles have provided plenty of variety in the exterior design of these houses, which are related by such characteristics as trim picket fenced dooryards, wall and roof treatment, windows and overhanging second floors, the latter also allowing for larger room sizes without increasing basement area. For example, house No. 1 (see construction details and plans on next two pages) has approximately 450 cu. ft. of space added to second floor by the three overhangs; the bedrooms and closets would



GROUP of houses on 44-foot lots carefully planned for maximum light and air; below, plot plan indicates placing of houses.

not be nearly as generous in size without this increase in cubage.

Mr. Blietz offers a complete building service—designing, building and financing. These six houses carry FHA 20-year amortized mortgages. He points out that in developing houses as a group there are certain resulting economies from planning, building and selling stand-points. This project offers values in attractive, well designed homes for comfortable living which compare very favorably with other houses of their price class in the vicinity, a high cost section of the country; further, it adequately shows that proper planning can reduce land cost through narrower lots without crowding.

Typical materials and equipment used in this group are listed in the following outline specifications:

FOUNDATION—12" poured concrete, asphalted, placed on 24" footings; basement floor, 4" concrete over 6" cinders.

FRAMING—Kiln dried precision lumber; 2" x 10" Y.P. 1st and 2nd fl. joists; 2" x 6" ceiling joists and rafters.

EXTERIOR WALLS—Common brick painted with Tamtex white below, wide clapboard above, over 1" x 6" D&M Y.P. sheathing and paper.

ROOF—Heavy 3-in-1 asphalt shingles over 15 lb. felt.

FLOORS—13/16" x 2 1/4" face clear red oak throughout except Armstrong linoleum in kitchen and bath.

INSULATION—Sidewalls, 1" Balsam-Wool; 2nd fl. ceiling 4" U.S.G. Rockwool.

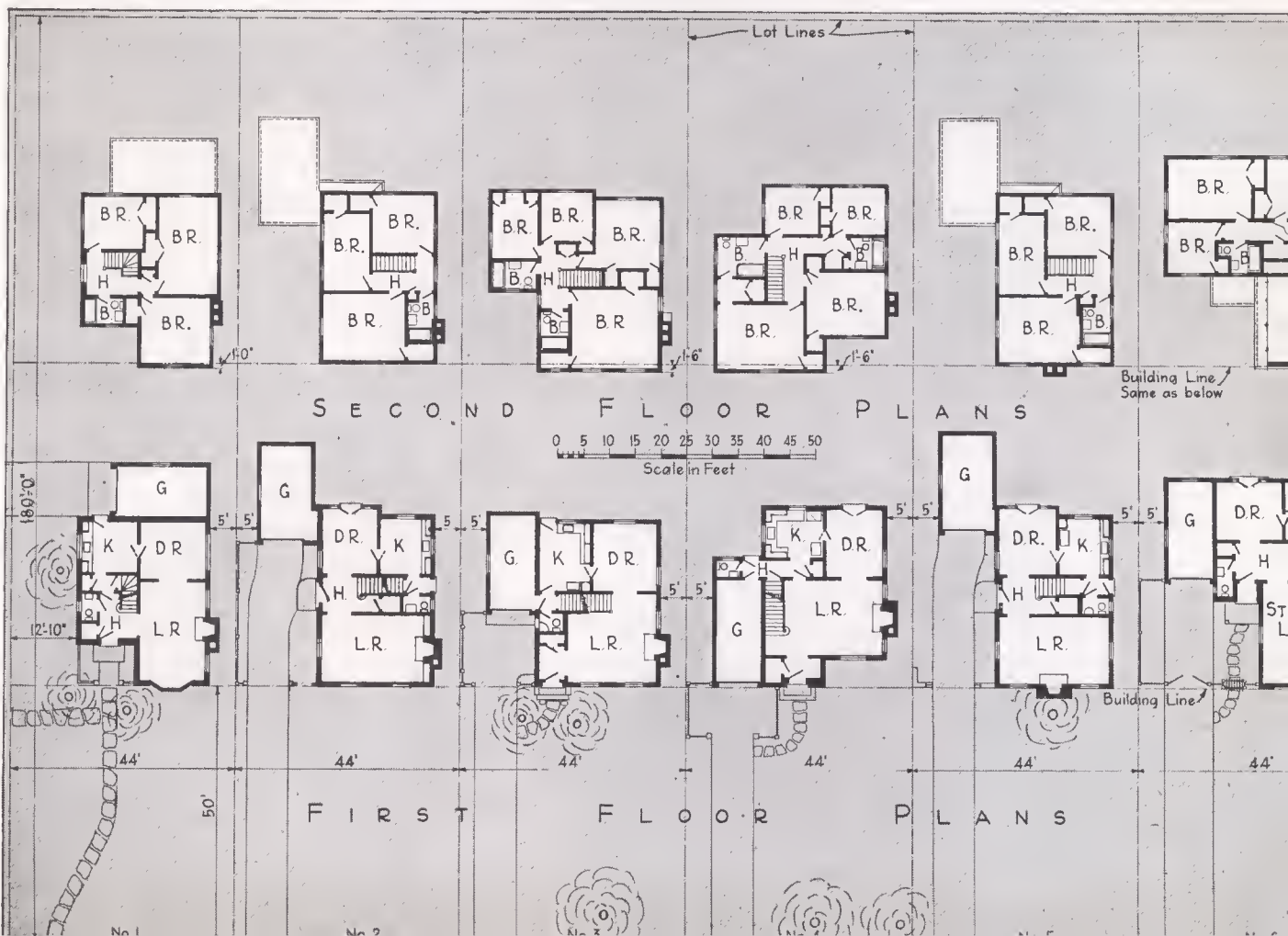
PLASTER—3-coat on U.S.G. Rocklath.

PLUMBING—Standard fixtures.

HEATING—Rudy gas-fired winter conditioning.

GLAZING—American Lustraglass.

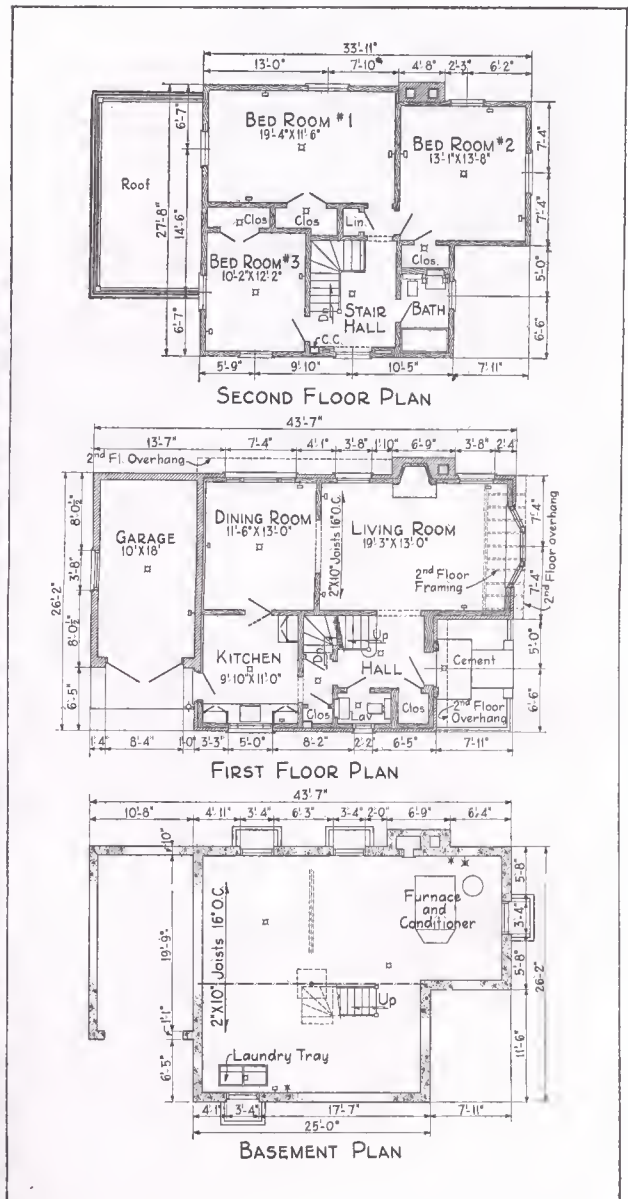
GARAGE DOORS—Barber-Colman upward-acting type.



LEFT: Side view of house No. 1 of a group of six homes which were recently completed for sale in Evanston, Ill., by Irvin A. Blietz, Chicago builder.

BELOW: At left, attractive front entrance is well detailed; white picket fence encloses trim dooryard. Good interior arrangement is shown in the floor plans.

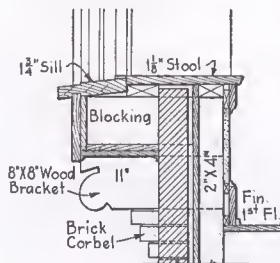
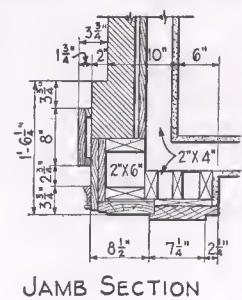
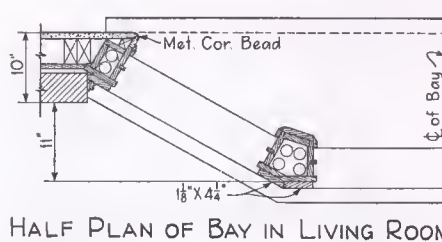
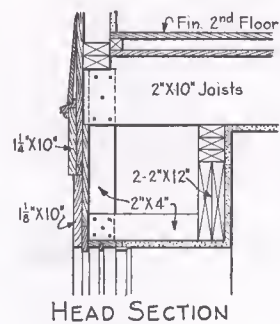
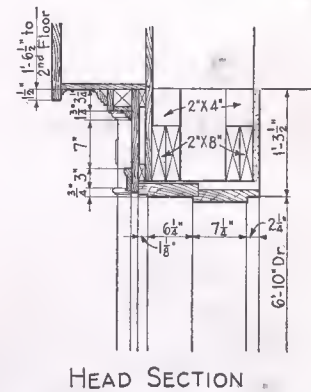
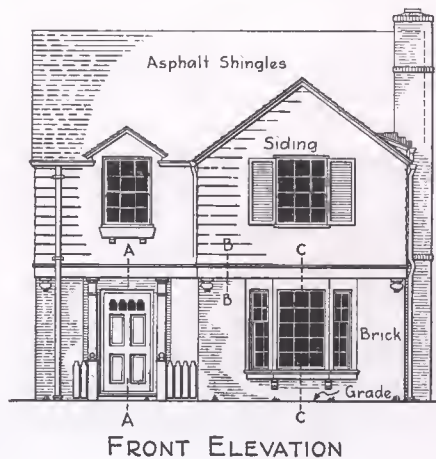
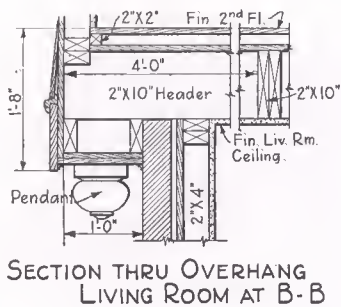
Details of House No. 1
in Group Project Described
on Pages 156 and 157
Irvin A. Blietz, Designer & Builder



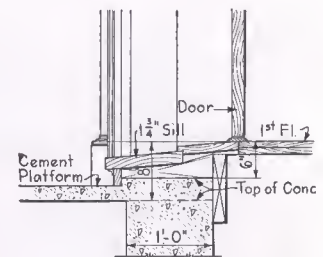
RIGHT: Three second floor overhangs add considerable floor area where it is useful, and give interest to the design. Building line at first floor is broken by projecting living room bay and similar features on the other houses.



BELOW: Construction details of house No. 1 indicate framing at cross sections through main entrance, living room overhang and bay as noted on front elevation. The joist framing of the latter detail appears on the first floor plan.



SILL SECTION AT C-C SHOWS BAY SUPPORTED ON THREE-COURSE BRICK CORBELS AND WOODEN BRACKETS; TWO 2x12's CARRY LOAD ACROSS INSIDE FACE AT THE HEAD SECTION. 2x10 HEADERS ARE 4 FEET LONG AS SHOWN IN SECTION AT B-B. FRONT ENTRANCE SILL, JAMB AND HEAD SECTIONS THROUGH A-A INDICATE FRAMING FOR RECESSED DOORWAY AND PROTECTING OVERHANG.



SILL SECTION A-A MAIN ENTRANCE DOOR



EARLY AMERICAN IN BRICK, BOARDS AND BATTENS

Designed and Built by Irvin A. Blietz of Chicago

Located in Evanston, Illinois

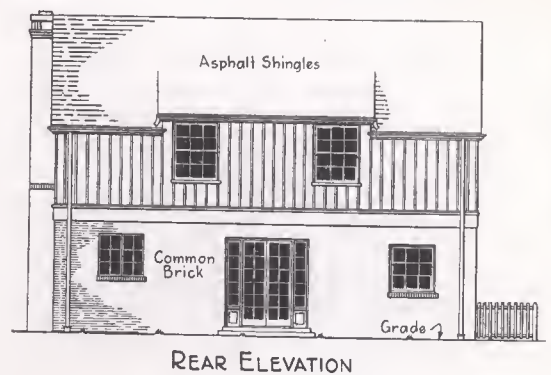
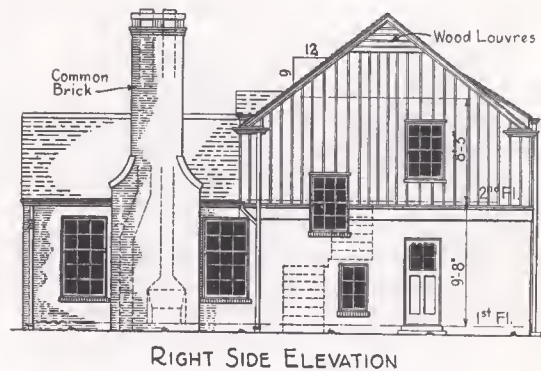
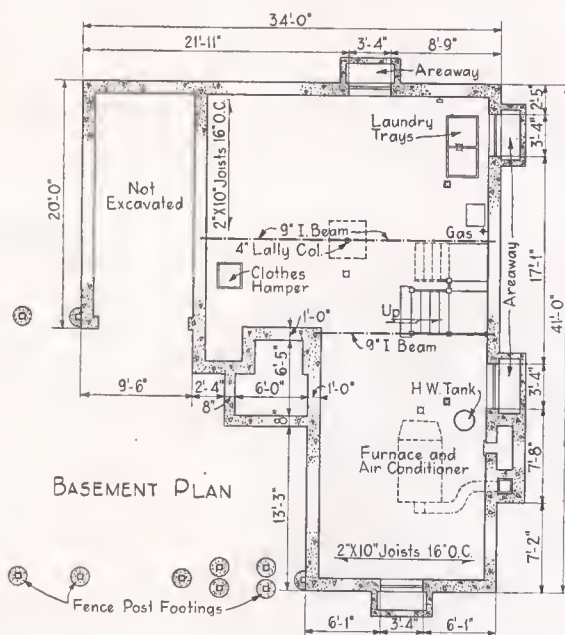
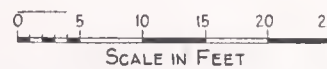
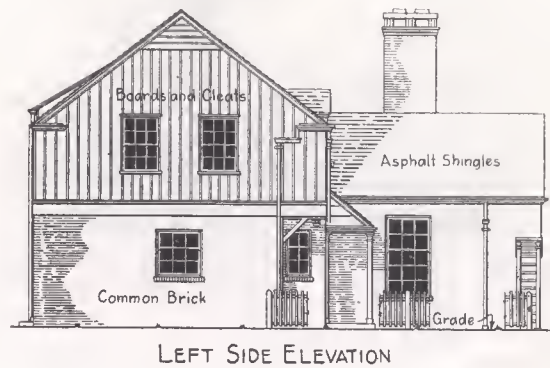
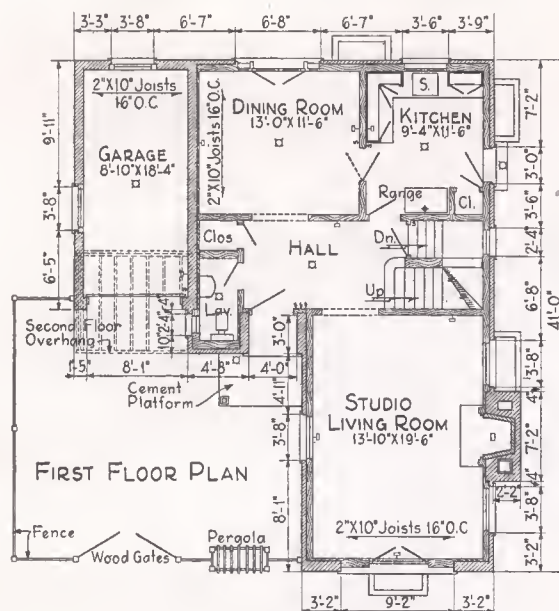
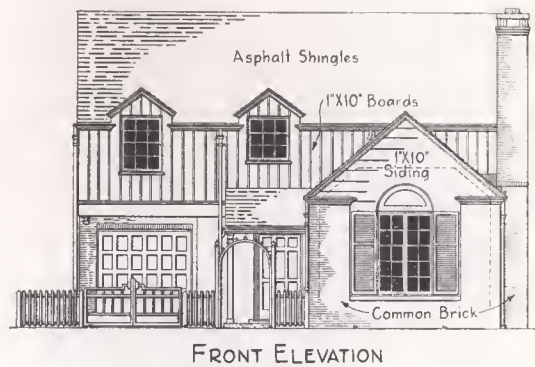
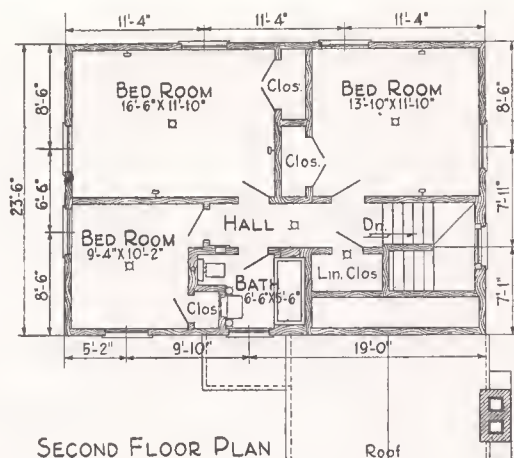
For presentation in full colors see page 138

AN UNUSUAL handling of plan and exterior in Early American style is found in this front cover house. The wing containing a studio type living room features a double casement window with wide decorative shutters. Garage entrance is protected by a second floor overhang which also reduces the prominence of the door. Picket fenced dooryard, a feature of increasing popularity with Colonial houses, is well detailed.

Plans and elevations appear on the opposite page. The high ceilinged living room has good wall space and is well lighted. French doors and side windows in dining room overlook the rear terrace; kitchen has an efficient U-shaped plan. Three bedrooms, bath and closet space are compactly arranged on 2nd floor.

Materials include exterior walls of common brick painted with Tamtex white below and Y.P. vertical boards and battens above, Balsam-Wool and USG rock wool insulation, 3-coat plaster on Rock-lath, gas-fired forced air heating, and Barber-Colman garage door.

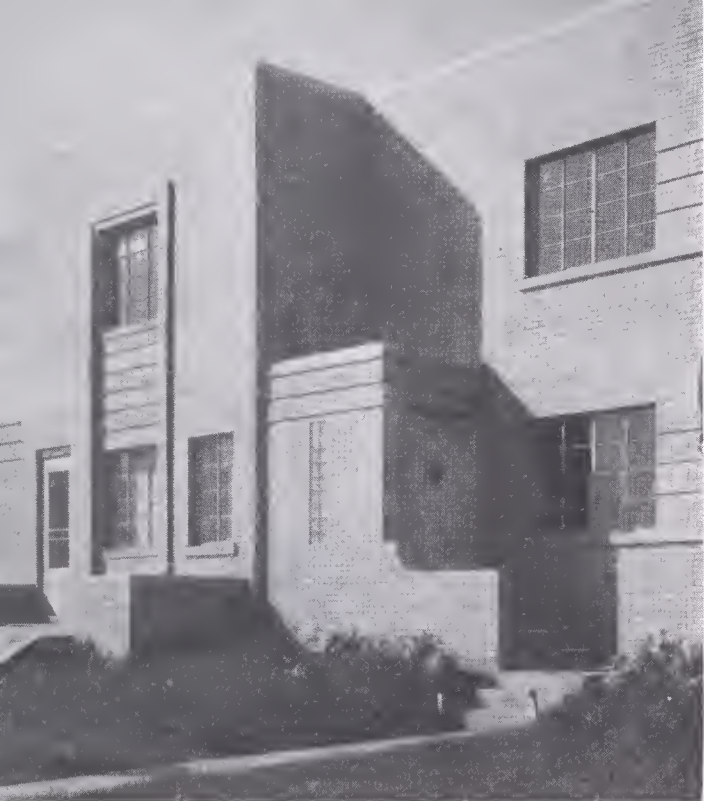




First Modern Row Houses in Chicago Find Ready Market

Fred J. Walsh Co. Completes and Sells the First Group of Attached Houses Built in Chicago in Past Fifty Years. Now Planning Other Units of Similar Type Dwellings

By R. E. SANGSTER



ANOTHER direct hit in determining the public demand in present day housing has been scored by the Fred J. Walsh Company of Chicago—the second time in the last two years that this building concern has come up with a winner! In 1935 Walsh successfully pioneered the “Off the Pavement Little Farm” idea in this area with suburban homesteads for the low income group. The development has since attracted national interest and to date one hundred and sixty of these homes have been built and sold with ten more already sold now under construction.

The 1937 success is in row houses. After due consideration, Walsh undertook to build a type of dwelling which had not been attempted in Chicago since the time of the 1893 World's Fair. The amazing public reception to the modern version of this old timer ended in a complete sell-out of the eight houses in the project to individual owners within four months after ground was broken last June—and sales occurred in a comparatively slow market.

As soon as this rapid turnover was evident, plans for building similar units were made. A second group practically duplicating the original row, except for slightly larger size, is being completed in Evanston just north of Chicago. Others are being planned for spring building. They will be altered somewhat in exterior and plan to include features which experience on the first two showed would add even further sales appeal.

It is interesting to analyze the returning popularity of such dwellings in the Chicago area; in Philadelphia these houses have had a continued run for a great many years due to early subdividing practice. But in Chicago there need be other reasons and Harry M. Quinn, construction manager of the Walsh Co., says, “These Town Houses are popular because they're a lazy man's house. All the conveniences of an apartment are offered to this type of renter in a home of his own—and at less cost than similar apartment housing.”

Mr. Quinn goes on to say that in the present market, which is below par, maximum value must be offered at minimum price. He then points out economies both in

construction and maintenance, which are known to exist in row housing. In the Walsh houses these savings amount to 40 per cent less building cost as compared to the average detached home of the same construction and size. Taxes and maintenance are 50 per cent less; the automatic gas heating also runs about half the average cost for similar cubage in single homes, the fuel bills for the 5-room units being estimated at \$75.00 a season. The front and private rear yards, although adequate to satisfy the desire for a plot of ground, do not require either great expense or labor to keep up. These are some of the attractive features.

Due to the above mentioned construction and land economics, it is possible to build on choice apartment sites which as yet hold little promise of immediate use for that type of structure. The neighborhood surrounding the Chicago project is zoned for apartments; it offers good transportation and living facilities. The unit land cost, while high for detached homes, is well within the economic limits for row houses.

Offering the advantages of a co-operative structure, these homes, individually owned, have none of the weaknesses associated with such buildings. Each carries its separate FHA 80 per cent mortgage. Monthly payments on the small houses amount to \$47.20.

Naturally, in these homes, as in any other, the planning must be well handled if the property is to be salable. Architect Martin H. Braun has done an unusually fine job of designing the project. None of the appearance or plan drawbacks usually associated with row houses are evident; he has redesigned the conventional row house to give it a new standard of livability and convenience.

The street views indicate how well the building fits into the neighborhood. Adjacent to the north are previously built two-flats; directly south Walsh built three detached houses to heighten the home appearance of the street. Between these two types of housing, the modern row structure presents enough similarity to a two-story apartment to be in harmony with nearby flats and apartments but retains a home atmosphere.

The smart exterior lines, although clean-cut, have none of the ultra-modern harshness. Buff colored pressed face brick is combined with limestone trim and glass block panels in the vestibules. Aluminum Venetian blinds and blue doors complete a pleasing effect.

The half-plans at the right indicate the efficient layout: houses Nos. 4, 3, 2, 1 (not shown) duplicate 5, 6, 7, 8. Ingenious planning has eliminated buried inside rooms. There is good use made of corner window treatment in all rooms of the sixes and in the kitchens of two five-room units, the latter being possible by staggering the unit placement. There is no waste cubage in these compact houses. Halls take up a minimum of space; storage facilities are ample.

Construction materials and equipment have been chosen for low maintenance and convenient modern living. Starting with the basement, the foundation walls are poured concrete finished in the large recreation rooms with a knotty pine wainscot and plaster walls and ceiling. In the utility rooms there are extra toilets. The automatic G-E gas-fired boilers supply forced-flow hot water to concealed radiation; domestic water supply is furnished by automatic gas heaters.

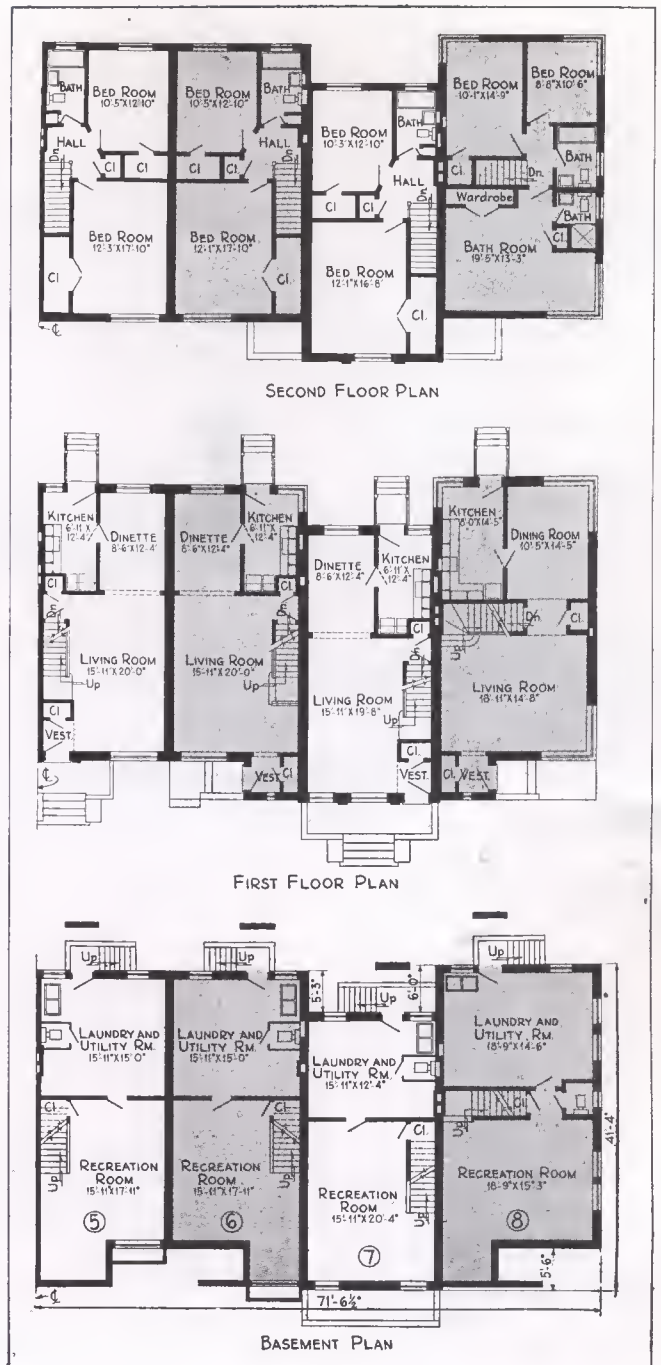
On the first floor, oak parquet floors are laid over precast joists and slabs. Wall finish is plaster over U.S.G. Rocklath, metallated on exterior walls. Fenestra sash and screens are used throughout. Modern treatment is accentuated with indirect lighting, metal corner beads around doors and windows with no trim, and white metal stair handrails. The kitchens are planned for labor-saving accessibility; plenty of metal cabinet and drawer space is built in and the large counter tops flank the double drainboard sinks; the floors and walls are linoleum-covered.

Two bedrooms and bath in the fives or three bedrooms and two baths in the sixes complete the houses. The baths are ceramic tiled and equipped with Briggs Beauty-ware fixtures. Ceilings are insulated with Balsam-Wool.

In conclusion, Mr. Quinn has pointed out the good investment possibilities of such projects since automatic heating and other low costs of maintenance would make them ideal as rental properties. However, whether for rent or sale, this type of housing brought up-to-date with good planning, sound construction and proper financing, has demonstrated its sales appeal in Chicago.

HALF PLANS above at right show modern, compact layout of houses 5, 6, 7, and 8; other four houses have plan reversed on center line. The front is broken by projecting houses 2 and 7 and variety of entrance treatment thus secured. Corner windows are used effectively in and houses.

ATTRACTIVE modern styling of the exterior is shown in the view at the right. Apartment-like appearance is in keeping with the neighboring two-flat buildings.



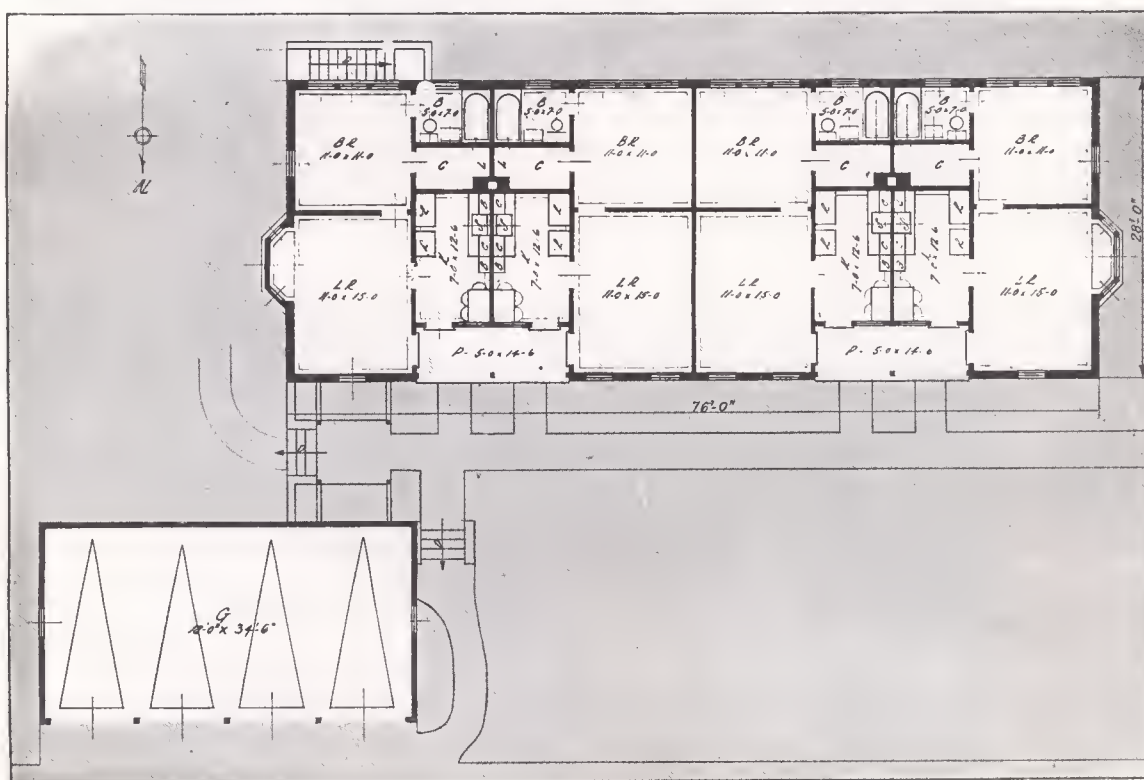


Economical Plan in Kansas Apartments

BECAUSE of the prevailing low rent scale in the oil town of Augusta, Kans., advantage had to be taken of all possible plan and construction economies in the recent building of a four-unit apartment structure. The results as seen in the exterior and floor plan are most interesting and unusual; pleasing Colonial styling and compact layout have been achieved by the architects, Butler and Rochester of Wichita, Kans.

The rooms are well arranged and ample in size for small families. A part basement provides for laundry, lockers and water heater. Outline specifications list the following construction features:

Foundations and Footings: Reinforced concrete. Floors: White oak flooring over 2" x 8", 16" o.c.; except kitchens and baths which are medium gauge Armstrong linoleum. Exterior Walls: Brick veneer (No. 1 common brick) over 2" x 4" studs, 16" o.c., and 1" x 10" white pine bevel siding. Interior Walls: Wood lath and plaster; wallpaper (Imperial) except in baths which are "Walltex" washable canvas. Roof: No. 1 edge grain red cedar shingles. Windows: Stock wood double-hung; Andersen casements and basement sash. Plumbing Fixtures: Crane; automatic gas-fired water heater. Heating: Coleman floor furnaces with Minneapolis-Honeywell thermostats, individually controlled; gas-fired. Weatherstripping: Protex. Electrical: Installation in BX cable; Lumiline lighting fixtures in kitchens.



HEATING system, not indicated in the plan, consists of gas-fired Coleman floor furnaces with units suspended below the floor.

Modern Two-Flat Building Combines New Materials and Advanced Planning

ALTHOUGH an extensive revival of two-flat construction has not yet occurred in most sections of the country, there has been considerable interest shown in those structures of this type which have been built recently. Some of these new structures are found to incorporate many of the same improvements in design and materials which are now found in single-family houses. An outstanding example of 1937 style two-family dwelling is illustrated on this page with plans and details presented on the two pages following.

It was designed and built by Architect B. Albert Comm, of Chicago, who has done considerable work in this field. The front elevation as seen above has been effectively handled in modern styling. Fenestration includes corner window placement in the living rooms and a panel of glass brick to light the stair well. Bands of colored face brick add to the modern decorative treatment which is further carried out by the canopy, flush entrance door and hardware.

The interior presents a definite feeling of spaciousness which was not always characteristic of older buildings of this kind. The circular, dome-ceilinged reception hall opens into a combined living and dining room which has a total length of 36 feet 6 inches. A projecting wing continuing from the mantelpiece screens off one end of this room for dining space. This projection illustrated below



is recessed for book shelves like the fluted mantel. Rounded corners harmonize with the 9-inch plaster cove.

There is ample storage space planned for these units. On each floor there are built-in cabinets and utility closet in the kitchen, a wardrobe and closet in the master bedroom, a closet in the second bedroom, linen and cedar lined closets off the rear hall and a guest closet off the reception hall.

Of particular interest is the manner in which the heating is handled to allow complete flexibility according to the wishes of either tenant. A Gilbarco oil-fired American

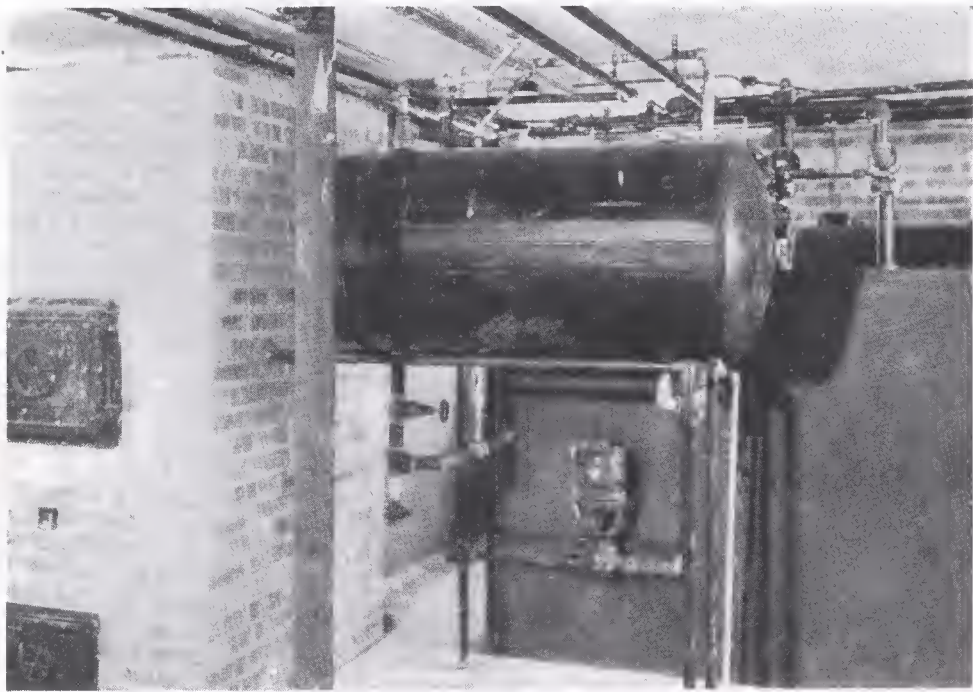
Radiator boiler supplies hot water under pressure through separate piping to each floor, and is operated by a dual system of Thrush controls. The boiler also furnishes year 'round domestic hot water; a second flue provides for a Kernerator incinerator.

Some of the other equipment used in the building includes American Radiator convectors, Standard plumbing, Lightolier fixtures, Ilg ventilating fan, Elgin cabinets and Schlage hardware. Walls are 12-inch solid brick, insulated with 1-inch Balsam-Wool and finished with 3-coat plaster over U.S.G. Rocklath. Roof is built-up composition type.

The building contains approximately 43,000 cubic feet and was erected at a cost of about 33 cents per cubic foot.



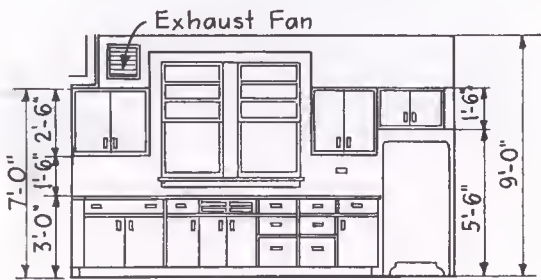
VIEW of the living and dining room in modern two-flat building showing the projecting mantel wing which screens dining space from living end.



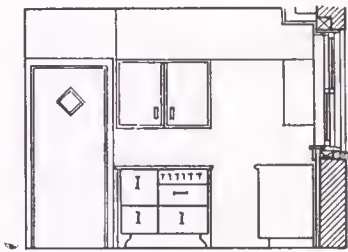
CONSTRUCTION
DETAILS OF MODERN
TWO-FLAT BUILDING
B. ALBERT COMM,
ARCHITECT

Other details appear on
the preceding page.

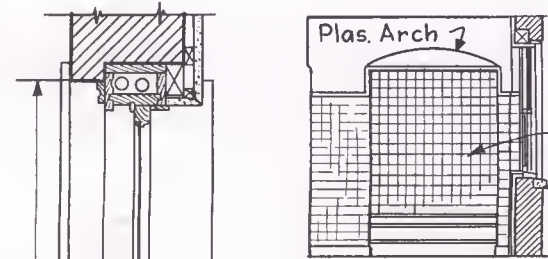
VIEW OF HEATING equipment at the left shows part of the encased oil-fired boiler with separate supply and return lines for both floors (note small pipe sizes). One of the pressure hot water circulators is seen in the return on this side of the boiler; the second one is similarly placed on the opposite side. The domestic hot water storage tank appears in the foreground and the oil storage tank is located back of the boiler at the right. At the far left is incinerator door and cleanout.



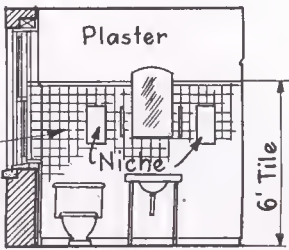
NORTH WALL OF KITCHEN



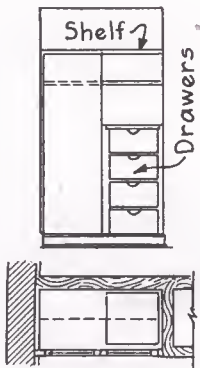
WEST WALL OF KITCHEN



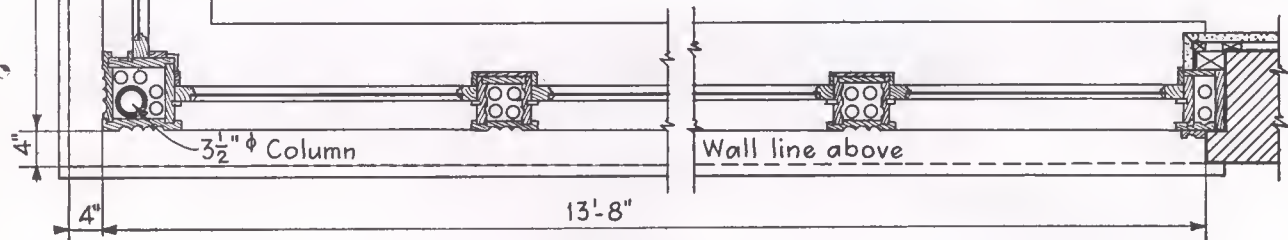
EAST WALL OF BATH



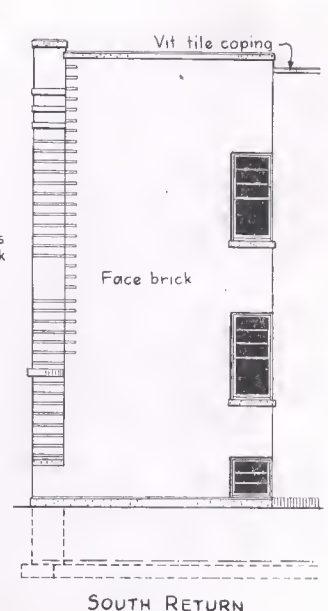
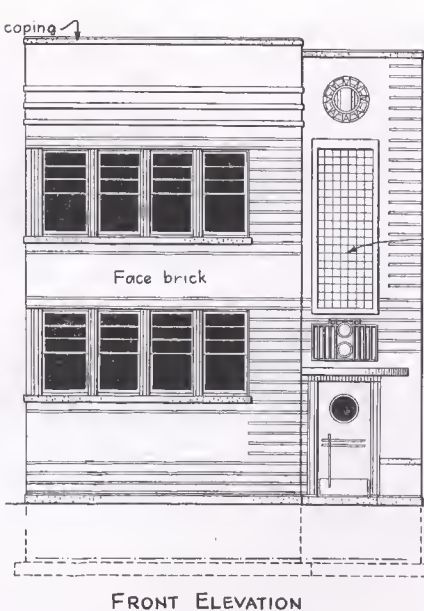
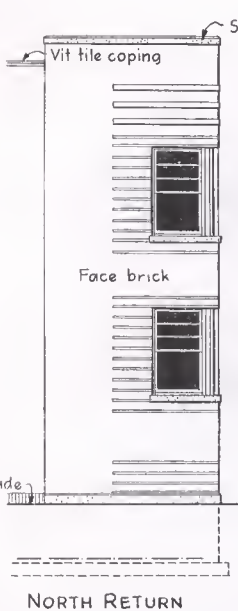
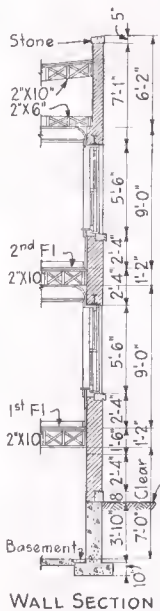
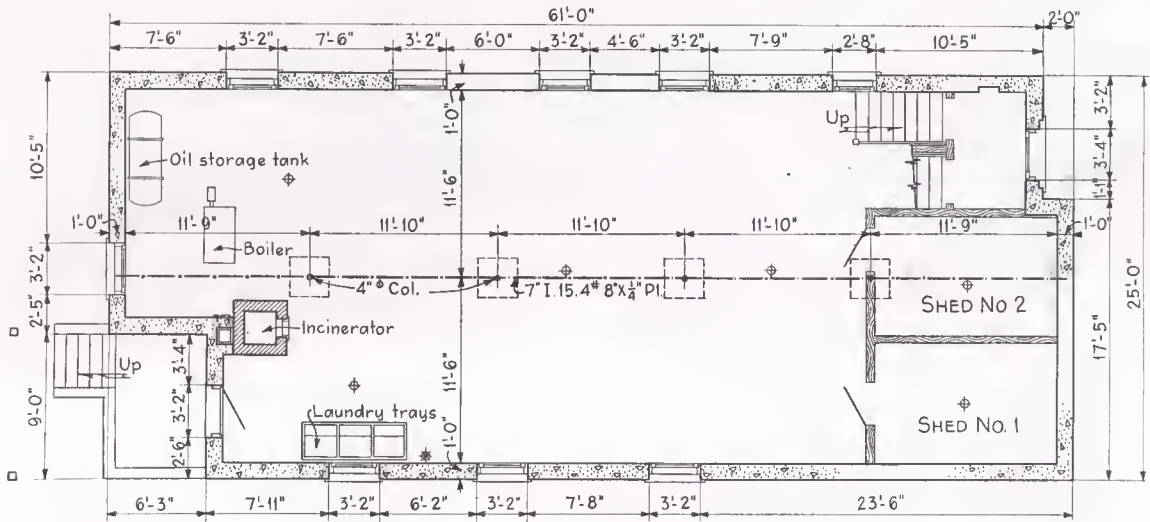
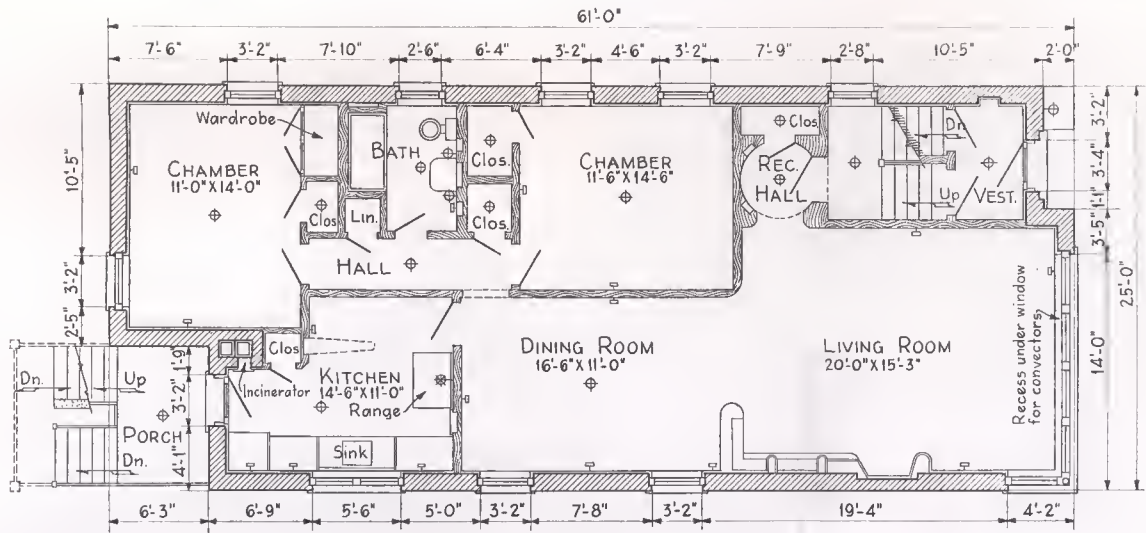
WEST WALL OF BATH



WARDROBE DETAIL



DETAIL OF CORNER WINDOW



Those Philadelphia

ROW



DESPITE the unkind things that visitors from other towns say, the builders of Philadelphia continue to put up row upon row of stone-front connected houses which they appear to sell with considerable success.

In favor of the row house, its proponents point out the economy and efficiency of a single block of buildings. Critics on the other hand point out that adequate light and ventilation are difficult problems and that uniformity of appearance is a liability.

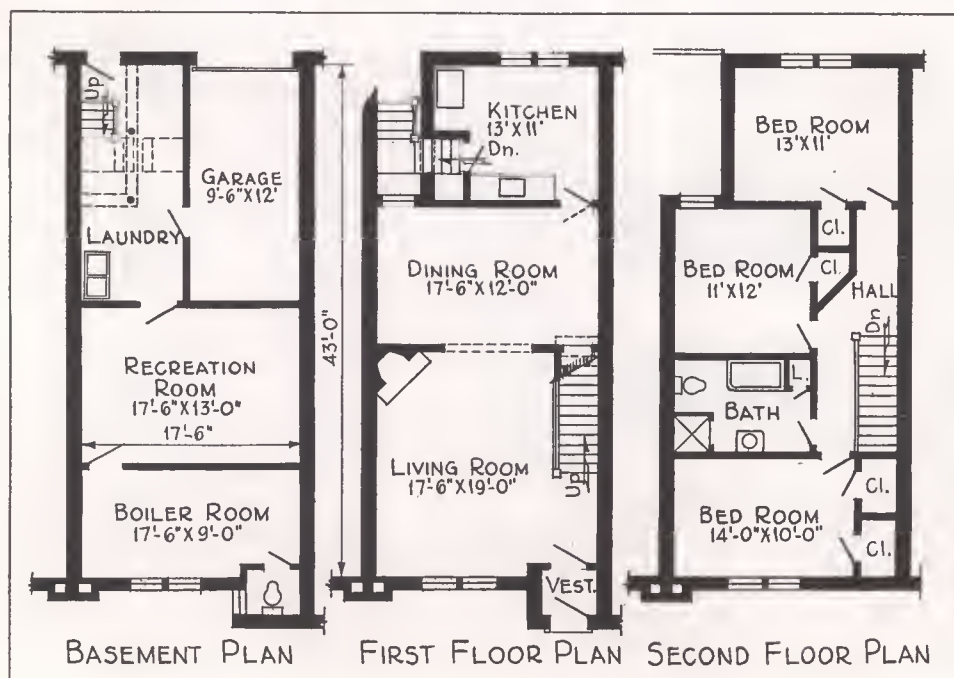
One of the better than average is illustrated, built by

the Mortimers—father and son. John W. Mortimer, Sr., started building 48 years ago and puts up an extremely substantial, well-built structure. His son continues the high standards.

The Mortimer homes extend for solid blocks, each identical in appearance and constructed of an expensive local stone. The architecture is nameless.

A typical flat is 17'-6" x 43', 2 stories and basement with recreation room and garage. The houses are built high to bring light into the basement. The basic problem of a row house—getting light and air, has

been partly solved in Mortimer's homes by leaving a small areaway at the rear to bring light into the dining room. A skylight gives ventilation to the bathroom. There is considerable waste space in the long halls. The floor plan is necessarily restricted by the row house and



TYPICAL PHILADELPHIA row houses built by contractor John Mortimer, who has been in the business 48 years and whose son is still carrying on. The long, narrow plan demanded by the row house makes it difficult to get light, but Mortimer produces a little in the dining room by means of a jog at rear. There is a skylight in the bathroom. This plan is better than the average for row houses but still compares unfavorably with single family homes,

HOUSES!

They Are Still Building Them— Regardless of the Modern Trend of Current Architecture and Design

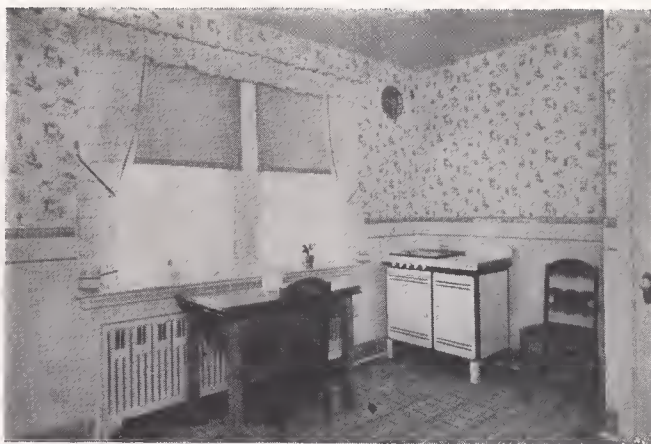
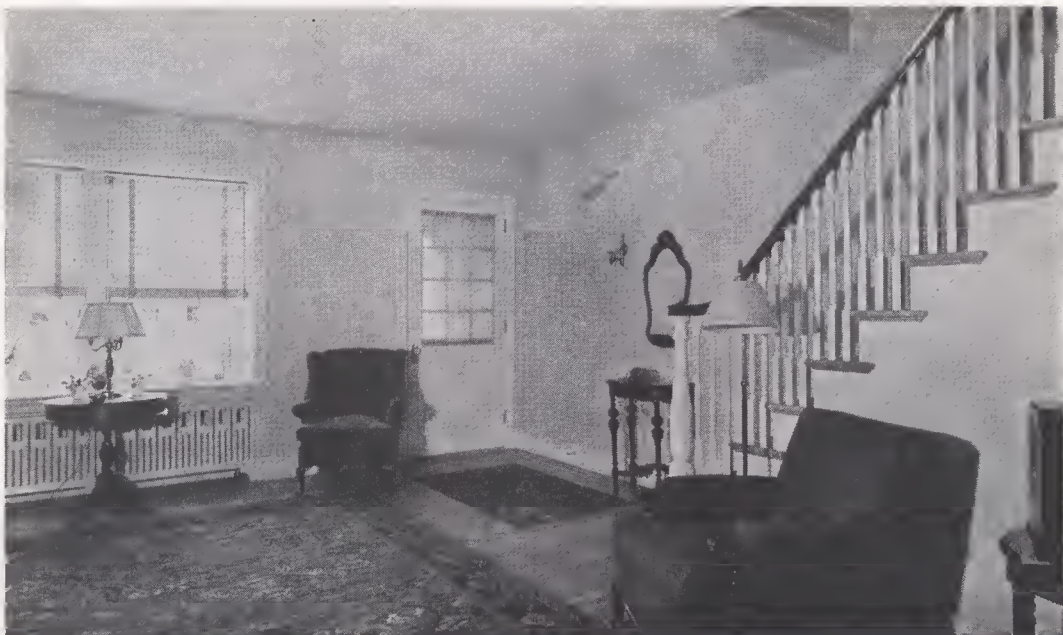
makes necessary things that would not be considered good construction in single-family, such as the stairs opening upon the middle of the living room and a dining room with only one small window. Nevertheless, the interiors have been made bright and cheerful and are well finished and well equipped.

Heating consists of a hot-water system with Weil-McLain boiler and concealed radiators. Plumbing is modern and complete, and the bathrooms are profusely tiled in bright colors and have a stall shower with glass door. Copper pipe is used throughout. 3 x 10 floor joists are used; finished first floors are No. 1 select oak flooring. The kitchens are equipped with Magic Chef ranges, Colonial kitchen cabinets and Victor ventilating fans. They are tiled 4 feet all around. Roofs are 4-ply felt and slag, with slate peaks, copper valleys and gutters. Doors and windows are well weatherstripped and caulked. There is a large recreation room in basement. The heavy foundations, solid stone fronts, elaborate concrete porches and steps and sound construction insure long life.

The economies of row-house construction are indicated by the fact that the sales price of a typical flat early this year was \$5150. It could be purchased with a down payment of \$1150 and monthly payments, including amortization, interest, taxes, water and fire insurance, of \$39.49.

The universal answer to criticism of the appearance and the old-fashioned arrangement of most of the row houses is, "they sell." No one knows how a similar type of house, if given better architectural treatment, would sell. Perhaps it would do much better.

LIVING room of one of the Mortimer row houses. The concealed radiators are placed under the large front windows. Stairs lead directly from living room—an undesirable feature.



THE MORTIMER kitchen is well lighted, and well heated by the large concealed radiator under the window. The walls are tiled 4 feet all around. Although large and cheery, the kitchen is poorly arranged for efficient use.



A SKYLIGHT lights the profusely tiled bath.

New Style for Old Apartments

THOUSANDS of apartment buildings in good neighborhoods, with the potentialities of drawing good rents, are falling to successively lower rent levels and attracting less desirable tenants because their owners ignore the necessity for keeping their buildings, exterior and interior, right up to 1937 standards. An apartment owner in Cleveland Heights, Ohio, last summer gave his building a casual renovizing on the exterior and was about to give the suites the usual perfunctory repapering and painting when Mr. and Mrs. Wilbur Henry Adams, well known commercial artists, who occupied one of the suites, offered to show what could be accomplished at surprisingly low cost by thorough modernizing. Their own suite was used for the experiment.

The old fashioned mouldings were torn off. Panels in the dining room were ripped out. Overhead lighting fixtures were removed. The radiators were covered. Venetian blinds were installed.

The fireplace was completely altered by squaring out the left hand wall jog with wallboard and building a glass brick corner at the other side. The wallboard used, Masonite Quartrboard, was nailed to studs on 16" centers right over one of the windows at the side of the fireplace, while a floor-length drape went over the other window. Joints between the 4' x 8' sheets were filled with Swedish putty, then buckram taped and the whole surface papered, giving a clean-cut modern appearance. Open bookshelves recessed at one corner



BEFORE: Typical old-style apartment interior with jutting fireplace and side windows; panelled dining room; bromidic ceiling fixtures.

make an effective color spot. Indirect lighting fixtures were put in. The floors were carpeted, functional modern furniture put in, and the 1937 renaissance in the Adams apartment was pronounced complete.

The total cost of the entire modernization, including the work on the fireplace, the Owens-Illinois glass bricks, the Venetian blinds, radiator covers, painting and papering, new sanitary fixtures, and all necessary labor was approximately \$500.

Impressed by the almost miraculous change, and even more impressed by the low cost figures and short time the job took, the building owner had every suite modernized in corresponding fashion.



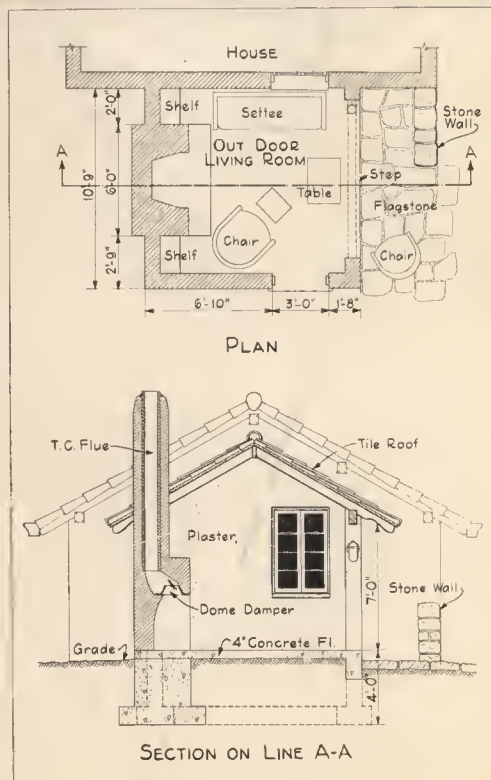
AFTER:
Cleveland
Apartment
Re-styled.



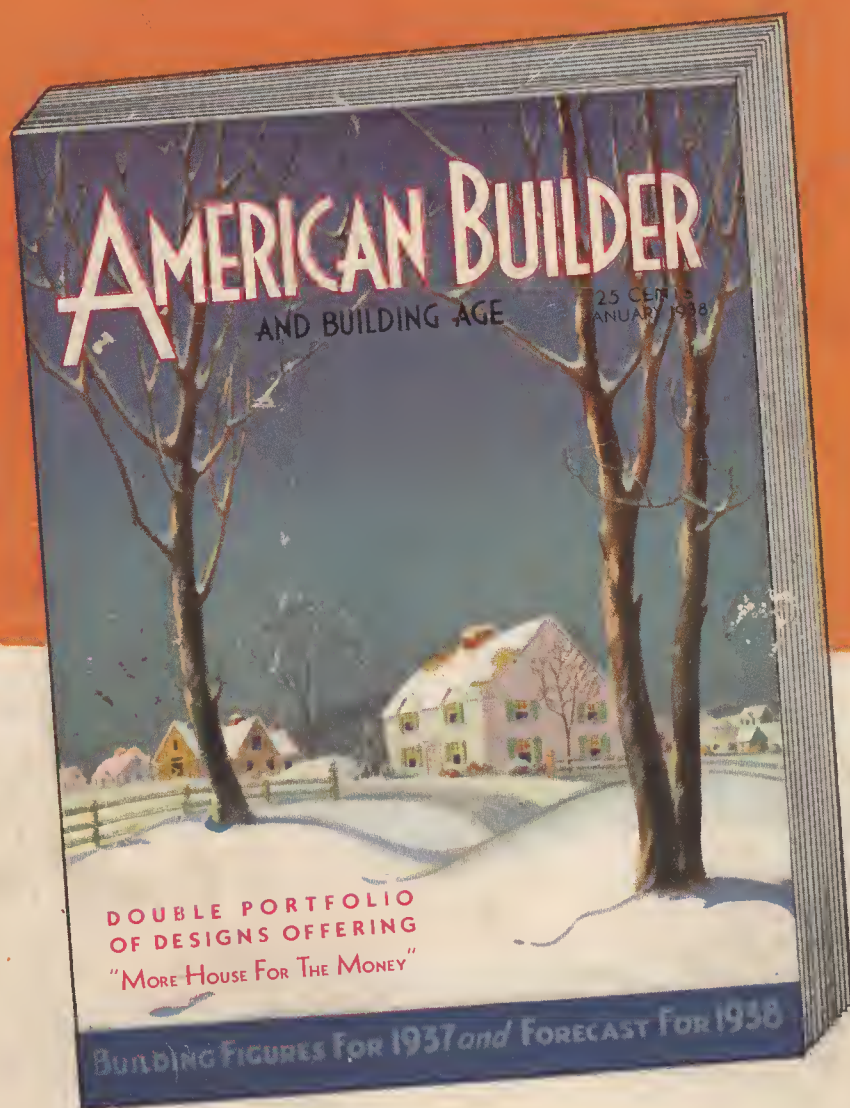
Outdoor Living Room

THE PLEASANT spot pictured above is a part of the house owned by L. A. Sharrad of Palos Verdes, Calif. It provides a quiet, restful corner for outdoor relaxation such as would be enjoyed by any home owner. Where the building site lacks sufficient width this feature could be built as a separate unit and placed to the rear of the lot as a garden shelter.

A plan and cross section below indicate the arrangement and construction of such a project. It is designed in keeping with the house; if built as an addition, the style should be in harmony. The fireplace is both decorative in appearance and useful for outdoor grilles and picnic suppers. Shelves provide places for ornamental bric-a-brac. The design was done by Architect A. F. Withey; Geo. E. Miller was the contractor.



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